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**A FIRST COURSE
OF
ENGLISH PHONETICS**

Harold E. Palmer

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A FIRST COURSE OF
ENGLISH PHONETICS



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A FIRST COURSE OF ENGLISH PHONETICS

INCLUDING AN EXPLANATION OF THE SCOPE OF THE
SCIENCE OF PHONETICS, THE THEORY OF SOUNDS,
A CATALOGUE OF ENGLISH SOUNDS AND A
NUMBER OF ARTICULATION, PRONUN-
CIATION AND TRANSCRIPTION
EXERCISES

BY

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CONTENTS

	PAGE
INTRODUCTION	vii
PART I.	
WHAT IS PHONETICS ?	I
THE STUDY OF SOUNDS, THEIR FORMATION AND CLASSIFICATION (with particular reference to English sounds)..	7
QUESTIONS ON THE PHONETIC THEORY	27
PART II.	
SYSTEMATIC ARTICULATION EXERCISES	33
PART III.	
SYSTEMATIC EXERCISES ON ENGLISH WORDS :	
SERIES A. The Catalogue of English Sounds (Phonetic Text)	39
SERIES B. Six Useful Sets of Words containing Weak Syllables (Phonetic Text)	56
SERIES C. Pairs of Words likely to be confused by Foreign Students (Phonetic Text).. .. .	58
SERIES A. (Orthographic Text)	63
SERIES B. (Orthographic Text)	79
SERIES C. (Orthographic Text)	81
SERIES D. Transcription Exercises	86

INTRODUCTION

This *First Course of English Phonetics* is intended primarily for foreign students of English; it can be used either as a text-book in the hands of a teacher or as a method of self-tuition. It may be used with those who have no knowledge whatever of English or as a corrective course for those whose previously acquired knowledge has been marred by unphonetic methods.

It may further be used by English students who wish to possess in a concise form the elementary facts of the phonetics of their own language in order to serve either as a preparation for the more serious study of the subject or as a stepping-stone to the study of the phonetic systems of foreign languages.

The more precise objects for which this book has been written are:

1. To serve as an answer to the question "What is Phonetics?"

2. To describe as concisely as is consistent with clearness the classification of sounds, more especially English sounds.

3. To provide a handy "catalogue" of the English sounds, each of which is accompanied by 20 characteristic examples chosen from among the most used monosyllabic words.

4. To demonstrate by means of a transcript of these words in the ordinary spelling the extremely complicated nature of English orthography, and by so doing, to show the impossibility of studying English pronunciation on an orthoepic basis.

5. To provide the student with a number of recapitulatory exercises in order to ensure the proper inculcation of the phonetic theory.

6. To provide the student with a graduated series of articulation exercises each one of which has been calculated to further his mastery of his vocal organs.

The method adopted in this course is based not only on the imitation by the pupil of the sounds articulated by the teacher, but also to a large extent on a preliminary study of the phonetic theory itself.

The reason for this is twofold.

In the first place, this procedure is calculated to introduce from the first lesson the all-important factor of *interest*. To many the most interesting side of phonetics is that part which defines the scope of the subject and explains of what it consists and its direct utility in language study. Once this latent interest is aroused, the student is eager to embark on the aspect almost equally interesting, the phonetic theory itself. He wishes to grasp the principles of pronunciation, and until he has done so, the articulation and pronunciation exercises will be somewhat in the nature of an uninteresting grind.

The second reason for which such prominence is given in the earliest stage to the phonetic theory, and for which we would urge the study of the classification of sounds by beginners, is the following one :

One of the greatest difficulties for those who take up the study of phonetics is clearly to recognize that sounds have identities of their own as quite distinct from the letters of the conventional alphabet. For them the various sounds are abstractions, bewilderingly strange and elusive.

The student conceives that the only way to recognize them is mentally to connect each with one of the familiar orthographic units ranging from *A* to *Z*. Nor is this astonishing. It is well known to students of psychology that we convert the unknown into the known by associating it mentally with something already known. The beginner, to whom each sound *qua* sound is an unfamiliar fact, most naturally strives to connect each one with something already known. This something proves almost invariably to be the

letters of his alphabet. The result must necessarily be a confusion of phonetics with orthoepy, and a consequent state of perplexity which in many cases utterly discourages the student from further efforts.

Now if, during the first stage, we talk to the student about his lips, his teeth, the blade of his tongue, about air currents, explosions and vibrations, if we encourage him to produce noises in different parts of his mouth, and produce noises for him to diagnose, if we show him how to sort and classify these noises, and give him labels to stick on each group, if we do all these things, we shall divert his mind from all alphabetic considerations and lead him once for all to the true starting-point.

By studying the classification of sounds, by listening, reading, talking and thinking about them, each one becomes clothed in its attributes, and consequently acquires a personality, an identity, an individuality, quite independent of all orthographic considerations. This individuality once established, the science of phonetics with its attendant exercises and adjuncts appears in its true light, a source of perpetual and cumulative interest, a delightful means to a much desired end.

Simple and lucid as the whole subject appears to the expert phonetician, it contains in reality a number of entirely distinct factors. One of these is the theory of the classification of sounds; another is the theory of notation, embracing the two distinct conceptions respectively of "broad" and "narrow" transcription. Another factor is the theory of identification and distribution of sounds, involving considerations of sound-attributes and divergences of pronunciation. Other factors are the auditive recognition of sounds, and the command over the organs of speech.

To these we must add a subjective factor: the beginner must unlearn and forget nearly all his notions of pronunciation previously acquired by unphonetic methods.

The sum of these factors constitutes for the beginner an array of seeming contradictions and a hopeless tangle of abstractions divorced from all that he has ever

conceived as concrete. It is sometimes difficult for the teacher of phonetics to put himself in the place of those to whom the subject is utterly unknown, and to realize the mentality of those to whom the *letter* is the central fact of all questions of pronunciation.

In two directions it is possible to err: either by confusing the pupil with information at the wrong moment, or by puzzling him by withholding information at the right moment. In the opinion of the author, the treatment adopted in these pages is best calculated to appeal to the absolute beginner and to cause him in the shortest possible time to "think phonetically."

In some cases it has been considered that this end is better served by somewhat crude statements in categorical form than by information of a more precise nature conveyed in a more guarded form.

No explicit directions are furnished in this book as to how each unknown English sound is to be acquired by the foreign student. Such directions must necessarily vary according to the native language of the student, and can only be given by a phonetically-trained teacher after having ascertained the particular tendencies of his pupil's articulation.

The pronunciation indicated throughout this book is that used by a large number of educated Southern English people. Advanced students will realize that the value of English sounds (especially vowels) is very unstable, and may vary considerably from one person to another.

Teachers using this book should adapt to their own pronunciation the various indications given in these pages, and must use their judgment as to within what limits divergences are permissible.

PART I.

WHAT IS PHONETICS? .

DEFINITION.

Phonetics is the science which treats of the *sounds* of which language is composed. It explains to us by means of appropriate terms and diagrams how these sounds are formed and to what positions of the organs of speech they correspond.

It shows us that all sounds may be divided (from the point of view of the learner) into two classes: *known sounds* (i.e. those we have already acquired either in our own language or in some foreign language) and *unknown sounds* (i.e. certain foreign sounds of which we are so far in ignorance).

By explaining how we form the *known* sounds, it enables us to proceed from these to the unknown sounds and to master them by intelligent and properly directed efforts.

While depending to a large extent on our faculties of imitation, it utilizes our faculties of understanding and comparison; by simple and concrete explanations it shows us what to do and what to avoid in order to produce the required sound.

PHONETICS CONCERNS SOUNDS ONLY.

All true information concerning *sounds*, their production and classification comes into the province of phonetics. This information may be clothed in the imprecise and perplexing terminology of the so-called pre-phonetic period or in the positive and simple terminology of the present day; in both cases we are working at phonetics.

Information concerned not with the production and classification of *sounds* but concerning the manner of

interpreting the letters of our conventional spelling is not *phonetics* but *orthoepy*.

MISCONCEPTIONS CONCERNING PHONETICS.

Some people misunderstand the nature of phonetics, they think that it consists essentially of replacing the classical alphabet and orthography by an artificial and difficult system of cabalistic signs. This is a misapprehension both of the nature of phonetics and of what is called the phonetic alphabet.

Just as there are people who say that the English system of money, weights and measures is absurdly easy, and that the continental decimal system is mysteriously difficult, there are also people who imagine that the old-fashioned "rules of pronunciation" (compiled by well-meaning but somewhat ignorant pseudo-phoneticians) are the embodiment of clearness and facility, and that the new-fangled phonetic alphabet is bewilderingly complicated. Both of these curious perversions of logic and commonsense are due to regrettable misunderstandings.

We would say to such people :

(1). Do not confuse *phonetics* proper with *Phonetic Notation* (i.e. the phonetic alphabet).

(2). Do not think that an alphabet is difficult because it contains strange-looking letters.

Just as it is possible to learn to sing and to play a musical instrument without the aid of the musical notation, it is also possible (although highly inexpedient) to learn about speech sounds without the aid of special symbols, but in both cases we should be doing a foolish thing in wilfully depriving ourselves of such simple and useful devices. The intelligent pupil, like the intelligent workman, seeks the simplest and most effective instruments which will enable him to perform with the greatest ease the work required of him.

THE CATALOGUE OF SOUNDS.

It has been found by experience that the simplest way to learn about the sound-system of any particular language is to consult a catalogue of the individual

sounds contained in it. In this catalogue each appears in its proper place, is described, explained and distinguished from its neighbours.

As long as the English student thinks that the French *u* (in *vu*) is a sort of English *u* (in *cube*), he will be unable to produce the former. As long as a French student thinks that the English *r* (in *red*) is a sort of French *r* (in *rouge*) he will be unable to produce the former.

In this catalogue some sort of notation must be devised in order to identify each sound, so that misunderstandings such as those mentioned above may not occur. Without the notation which fixes the sounds in our memory we shall certainly confuse the different items of which this catalogue is composed. We might use numbers for this purpose, and speak of Sound No. 1, Sound No. 2, Sound No. 3, etc.

SYMBOLS.

To a certain extent this is frequently done, but all students feel that in addition to such numbers, each sound ought to be associated with some symbol or letter just as each musical note is associated with a symbol or written note.

Few things are easier than to compose a rough and ready phonetic alphabet, but few things are more difficult than to draw up a simple yet consistent and adequate system suitable for applying to all languages.

THE PHONETIC ALPHABET.

The system devised by the International Phonetic Association possesses these qualities in a high degree, and has, moreover, the advantage of being in actual use in all countries where phonetics is studied.

The uninitiated may ask why the compilers of this alphabet, instead of including strange forms such as [ə], [ʃ] or [ŋ], should not have contented themselves with the more familiar forms of the Anglo-Latin alphabet.

Those who ask this very natural question have perhaps lost sight of the fact that the Anglo-Latin alphabet contains but 26 letters, whereas most languages (including English and French) contain nearly 40 distinct sounds.

When we add that a catalogue of sounds culled from the dozen or so most studied languages will embrace nearly 100 distinct sounds, it will be manifest that our classical Anglo-Latin alphabet is hopelessly inadequate for the purposes of a simple notation.

DIFFICULT AND EASY ALPHABETS.

To those who say that symbols such as [ə], [ʃ] or [ŋ] are "difficult" we would mention the self-evident axiom that *the degree of difficulty of a given alphabet is not to be measured by the number of strange letters, but by the extent to which one letter is made to represent two or more sounds.*

If a given alphabet contains 26 letters in order to represent 40 sounds, that alphabet is an exceedingly difficult one, even if all the letters have familiar shapes. If a given alphabet contains 40 letters in order to represent 40 sounds, that alphabet is an exceedingly easy one, even if all the letters have totally unfamiliar shapes.

The Russian alphabet is difficult not because it contains a large number of letters, nor because most of them have unfamiliar shapes, but because they do not correspond consistently with the sounds of the Russian language.

Let it be remembered that while any student can master the *shapes* of a dozen or so strange *letters* in the course of an hour, it may probably require months to master the articulation of a single difficult foreign sound.

The phonetic alphabet as applied to English contains but twelve "strange letters," even when we include among these such forms as [ɑ], [ʒ] or [æ].

THE ANCIENT AND MODERN POINTS OF VIEW.

Before starting to work on a course of phonetics, the student would do well to realize the essential difference between the modern and the antiquated points of view of the study of pronunciation.

The old-fashioned (and hopelessly impossible) idea was to teach first the conventional spelling of languages such as English or French, and then to draw up and learn by heart a bookful of so-called "rules" showing how to pronounce it.

The modern idea is to teach first the *sounds* of the foreign language (thus enabling the student to speak and to understand), reserving for a later stage the acquiring of the ability to read and to represent the conventional orthographic forms of the sounds he has learnt.

This is the method which has always been in use by the native users of language. Long before ever learning our native alphabet we have already learnt to produce and to recognise all our native sounds, and to use them in the form of syllables, words and sentences. Before ever learning to read our own language, we are familiar with some thousands of words in their phonetic aspect.

SUBSTANCE AND SHADOW.

In other terms, according to the modern idea, students are taught to do for the foreign language exactly what they have already successfully done for their native tongue ; they are taught not to leave the substance of speech for the shadow of its orthographic representation, but to grasp the substance, and by so doing, to acquire both substance and shadow.

A DIFFICULT AND UNNATURAL PROGRAMME.

To those whose sole aim is to acquire the power of reading or writing, to those who will never have either occasion nor opportunity to speak or to hear the language, to those who have no ambition whatever in the direction of spoken language, we would say : Go your way ; leave alone not only phonetics but also abandon all pretensions whatever towards the spoken aspect of language ; let there be no talk of pronunciation, for the subject is of no interest to you, confine your attention to the particular end you have in view.

To those who desire, in addition to the power of reading and writing, a smattering of pronunciation on an orthographic or orthoepic basis by non-systematic methods, we would say : Your programme is an unnatural one, it will do violence to the nature of language itself, and nature will retaliate by so deadening your ears and so weakening your powers of imitation that, should you subsequently wish to do so, you will be

unable to correct the vicious habits that will have been engendered by your neglect.

To those who think that this programme has at least the saving grace of facility, we would say: You are mistaken; your programme, in addition to being unsound, is also extremely difficult. Many students have adopted the modern idea because by so doing they circumvent the tediousness and drudgery of the orthoepic system now discredited on every count.

THE STUDY OF SOUNDS,
THEIR FORMATION AND CLASSIFICATION.

(*With particular reference to English sounds*).

The basis of speech sounds is the current of air flowing up from the lungs and modified in various ways during its passage through the vocal chords, the mouth and the nose.

All sounds are divided into two main classes :

- (1). Those produced without any *obstruction* of the air passage ;
- (2). Those produced by some form of *obstruction* of the air passage.

For the sake of simplicity and conciseness, we may call the former *vowels*, and the latter *consonants*. Strictly speaking, we should call them respectively *vowel-sounds* and *consonant-sounds*, in order to distinguish them from *vowel-letters* and *consonant-letters*.

The student of *letters* says that there are in English 5 vowels, 19 consonants, and 2 letters (*w* and *y*) which may be vowels or consonants ; the student of *sounds* says that there are in English 12 simple vowels, and 23 consonants, without counting a certain number of double vowels (called diphthongs), and double consonants (called affricates).

The 12 non-obstruction or vowel-sounds used in Southern English are :

			The vowel in				the phonetic symbol for which is		
1.	..	..	<i>see</i>	..	..	..	i:		
2.	..	..	<i>give</i>	..	..	..	i (or I)		
3.	..	..	<i>ten</i>	..	..	..	e		
4.	..	..	<i>back</i>	..	..	..	æ		
5.	..	..	<i>calm</i>	..	..	..	ɑ:		
6.	..	..	<i>stop</i>	..	..	..	ɔ		
7.	..	..	<i>all</i>	..	..	..	ɔ:		
8.	..	..	<i>book</i>	..	..	..	u (or U)		

			The vowel in			the phonetic symbol for which is
9.	..	..	too	..	..	u:
10.	..	..	up	..	..	ʌ
11.	..	..	bird	..	..	ə:
			The first sound in			
12.	..	..	again	..	..	ə

English people with no phonetic training are not conscious of the existence of most of these vowel-sounds; they imagine No. 3 to be what they call the "short form" of No. 1; No. 4 to be the "short form" of No. 5, and others to be the "short forms" of certain diphthongs.

In addition to the above 12 *pure* (or *simple*) vowels, there are 9 *double-vowels* (or *diphthongs*):

			The compound vowel in			the phonetic symbol for which is
13.	..	..	late	..	..	eɪ
14.	..	..	go	..	..	oʊ
15.	..	..	five	..	..	aɪ
16.	..	..	now	..	..	aʊ
17.	..	..	boy	..	..	ɔɪ
18.	..	..	dear	..	..	iə
19.	..	..	where	..	..	ɛə
20.	..	..	more	..	..	ɔə
21.	..	..	sure	..	..	ʊə

English people with no phonetic training are perfectly unconscious that many of these sounds (particularly Nos. 13, 14 and 15) are compound vowel-sounds. This is due to the fact that they are generally written with simple vowel-letters.

The 23 obstruction or consonant-sounds of Southern English are:

			The first sound in			the phonetic symbol for which is
22.	..	..	put	..	..	p
23.	..	..	be	..	..	b
24.	..	..	take	..	..	t
25.	..	..	do	..	..	d
26.	..	..	come	..	..	k
27.	..	..	go	..	..	g
28.	..	..	my	..	..	m
29.	..	..	no	..	..	n

			The last sound in		the phonetic symbol for which is
30.	..	..	<i>bring</i>	..	ɪŋ
			The first sound in		
31.	..	..	<i>wait</i>	..	w
32.	..	..	<i>five</i>	..	f
33.	..	..	<i>very</i>	..	v
34.	..	..	<i>thin</i>	..	θ
35.	..	..	<i>then</i>	..	ð
36.	..	..	<i>rose</i>	..	r (<i>or</i> ɹ)
37.	..	..	<i>yes</i>	..	j
38.	..	..	<i>hat</i>	..	h
39.	..	..	<i>so</i>	..	s
40.	..	..	<i>zinc</i>	..	z
41.	..	..	<i>shut</i>	..	ʃ
			The buzzing sound in		
42.	..	..	<i>pleasure</i>	..	ʒ
			The first sound in		
43.	..	..	<i>like</i>	..	l
			The last sound in		
44.	..	..	<i>tell</i>	..	ɫ (<i>or</i> l)*

English people with no phonetic training will not recognise any of those consonant-sounds which do not correspond to some definite letter of the ordinary English alphabet. They will imagine Nos. 30 and 41 to be double consonants, they will be unconscious of any difference between Nos. 34 and 35, or between Nos. 43 and 44. They will be unconscious of the very existence of sound No. 42.

Although any two successive consonant-sounds may become assimilated into what we call a double-consonant, it will be convenient to note the two following compounds owing to the fact that they are considered by many as single sounds :

			The first (and last) sounds of		the phonetic symbol for which is
45.	..	..	<i>church</i>	..	tʃ
46.	..	..	<i>judge</i>	..	dʒ

* There is no significative difference between Nos. 43 and 44 ; the former is used when followed by a vowel-sound and the latter in all other cases. For this reason in an ordinary phonetic transcript the symbol [ɫ] is usually replaced by [l].

Before proceeding any further in the classification of these sounds we shall do well to examine the following diagram, in which the principal organs of speech are shown :

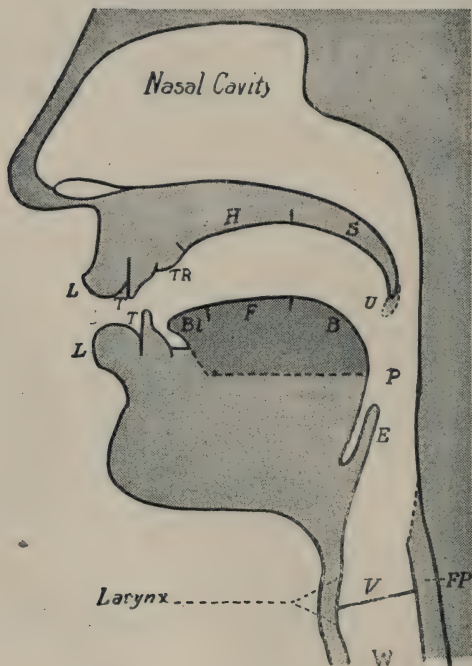


Fig. 1.*

LL. The lips.

TT. The teeth.

TR. The teeth-ridge (or simply ridge).

* Reproduced by permission from the "Outline of English Phonetics," by D. Jones.

- Bl.* The blade of the tongue. (The flexible fore-part of the tongue; the only part of the tongue which can project from the mouth).
- H.* The hard palate (extending from the ridge to the soft palate).
- F.* The front of the tongue. (That part which, when in a state of rest, is opposite the hard palate).
- S.* The soft palate (which may be raised or lowered, and which may also be made to close or open the passage to the nasal cavity).
- B.* The back of the tongue. (That part which, when in a state of rest, is opposite the soft palate.)
- U.* The uvula. (Not used in the production of any English sounds.)
- P.* The pharynx.
- E.* The epiglottis.
- FP.* The food passage
- V.* The vocal chords (similar to a pair of lips).
- W.* The windpipe (leading to the lungs or "bellows").

} Not used in the production of
speech-sounds.

The student should now study the above diagram attentively. He should then make a more or less rough copy from memory, compare it with the original and correct any errors. This operation should be repeated until he can produce a faultless copy without any hesitation. By so doing he will not only render his subsequent work very easy but will also generate an intense interest in phonetic work in general.

Before proceeding to the study of sounds 1 to 21 (the vowel-sounds) we will examine the easier theory of consonant-sounds.

We have already stated that a consonant-sound is produced by means of an obstruction in the air passage. Theoretically it is possible to form obstructions at almost any point from the lips to the vocal cords, but in practice we find eight well-defined spots at which obstructions are generally formed.

Let us number these obstruction-points from 1 to 8, as shown in the following diagram:



Fig. 2.

1. The lip-lip (or bilabial) obstruction, as when we pronounce *p* in *put*.
2. The teeth-lip (or labio-dental) obstruction, as when we pronounce *f* in *five*.
3. The teeth-blade (or linguo-dental) obstruction, as when we pronounce *th* in *thin*.
4. The ridge-blade (or alveolar) obstruction, as, when we pronounce *t* in *take*.
5. The hard palate-front (or palatal) obstruction, as when we pronounce *y* in *yes*.
6. The soft palate-back (or velar) obstruction, as when we pronounce *c* in *come*.
7. The uvula-back (or uvular) obstruction, as when we gargle.
8. The vocal chords (or glottal) obstruction, as when we cough.

Now there are three ways of classifying consonant-sounds. (We may call these the three bases of consonant classification).

The first is that in which we consider the consonants according to the place *where* the obstruction or obstructions are formed.

If we pronounce carefully and correctly the 23 English consonant-sounds (not the letters of the alphabet, but a specimen of each sound), we shall discover that they are disposed in this respect as follows :

Obstruction Place	1.	p, b, m, w.*
"	2.	f, v.
"	3.	θ, ð.
"	4.	t, d, n, r, s, z, ʃ, ʒ, l, ł.†
"	5.	j (the sound of y in <i>yes</i>).
"	6.	k, g, ŋ, w.*
"	7.	(None).
"	8.	h.

It would be well to read over the above several times and to check each statement by experiment until this first basis is perfectly understood. Be very careful not to confuse *consonant-sounds* with the *names of consonant-letters*. There is an enormous difference between [θ] and *tee-aitch*, or between [w] and *double-you*, or between [g] and *djee*.

The second way to classify consonant-sounds is to consider, not the *place*, but the *kind* or *degree* of obstruction. Broadly speaking, we may in this respect determine two main classes: Complete Obstructions (in which the passage is so closed that no air can issue at all), and Incomplete Obstructions (permitting the air to escape more or less easily through the imperfect obstacle).

* [w] is a sound with a double obstruction, one being in the No. 1 and the other in the No. 6 position.

† [ł] will be found to be accompanied by a "narrowing" (not an "obstruction") in the No. 6 position.

Complete Obstructions.—The sounds which result from complete obstructions are of two classes: *Plosives* and *Nasals*.

1. *Plosives.*—In this case both nasal and oral passages are completely closed in order to imprison and compress the air; then by suddenly removing the mouth obstruction, this compressed air bursts out in a puff or explosion (whence the term *plosive*).

In English we place in this category the sounds [p], [b], [t], [d], [k], and [g].

2. *Nasals.* In this case we make once again a complete obstruction of the mouth passage at a given point, but instead of compressing and exploding the air we allow it from the start to pass steadily through the nose (whence the term *nasal*).

In English we place in this category the sounds [m], [n], and [ŋ].

(In order to produce these sounds as distinct from letters, let us close the two lips and hum a note; the result will be [m]. Similarly by obstructing in the No. 4 and No. 6 positions, our hummed note will result respectively in [n] and [ŋ].)

Incomplete Obstructions.—The sounds which result from incomplete obstructions may be divided into three classes: *Simple Fricatives*, *Sibilant Fricatives* and *Lateral Fricatives*.

1. *Simple Fricatives.* In this case we bring the adjacent parts towards each other very closely, but not so closely as to prevent the air from forcing its way through. [f] is a typical fricative; produce a [f] and prolong it so as to make it last five or six seconds, and you will perceive that the air is escaping between the top teeth and lower lip in a steady stream. It is a rubbing or frictional sound (what the French would call a *frôlement*), whence the term *fricative*.

The English simple fricatives are generally considered to be [w], [f], [v], [θ], [ð], [r], [j], and [h].

The effect of these may be compared to the noise made by an escaping jet of steam or gas.

2. *Sibilant Fricatives*.—Four particularly shrill varieties of fricatives, viz. [s], [z], [ʃ], and [ʒ], are produced by forcing the air through particular kinds of obstruction formed (in No. 4 position) by the blade of the tongue and the ridge; these are called Sibilant Fricatives or Sibilants.

3. *Lateral Fricatives*.—The two sounds [l̥] and [ɮ̥] are called *lateral fricatives* (or simply *laterals*) because the tip of the tongue being firmly pressed against the ridge, the air can only issue round the side or sides of the raised blade.

Affricates.—There are two of these in English, viz. [tʃ] and [dʒ]; they are compound sounds of which the first element is a plosive and the second a sibilant fricative.

In French and other languages there are one or more sounds called *trills*. These consist of producing a *vibration, roll, or trill* at a given point of obstruction. These participate in the nature of both plosives and fricatives. No trills exist in Southern English, and the average English student finds it very difficult to produce them.

The third way to classify consonant-sounds is to divide them according to whether they are noises made by the air alone or whether this air-noise is accompanied by the *voice*.

What we call voice is the vibration of the vocal chords. By means of certain muscles we can so place these "lips of the throat" that they will vibrate and produce a musical note. This noise may be added to that produced by the air at the other places of obstruction. Thus by adding voice to the air-noise made in articulating a [f], we produce the sound [v].

Every consonant* may be voiced or voiceless; in all

* With the exception of a certain sound known as the *glottal stop*, which does not occur in normal English.

languages we find such pairs of consonants, but in most languages there appear to be gaps on one side or the other (voiced consonants without any corresponding voiceless, and *vice-versa*).*

The following list will show the English consonants classified on this vocalic basis :

Voiceless Consonants.	Voiced Consonants.
p	.. b
t	.. d
k	.. g
-	.. m
-	.. n
-	.. ŋ
-	.. w
f	.. v
θ	.. ð
-	.. r
-	.. j
h	.. -
s	.. z
ʃ	.. ʒ
-	.. l
-	.. ɫ
tʃ	.. dʒ

The three bases of classification can now be shown in the form of a table :

* It should be noted that even the missing sounds are sometimes produced in a given language by accidents of assimilation. The English sound [r], for instance, is normally voiced, but often becomes unvoiced in such words as *try* or *cry*. It should, however, be noted that such pairs of consonants correspond to no significant difference in English ; should we vocalize the [r] in question, it will result in no difference of meaning, whereas if we replace [f] by [v] (e.g. *view* for *few*) we change the meaning of the word.

	1. Lip Lip.	2. Teeth Lip.	3. Teeth Blade.	4. Ridge Blade.	5. Hard Palate Front.	6. Soft Palate Back.	7. Uvula Far-back.	8. Vocal Chords.
Complete Obstructions	Plosives	p b		t d		k ɡ		
	Nasals	- m		- n		- ɲ		
Incomplete Obstructions	Simple Fricatives	- (w)	θ ð	- r	- j	- (w)		h -
	Sibilant Fricatives			s z ʃ ʒ				
	Lateral Fricatives			- l, ɬ				
	Affricates			tʃ dʒ				

Fig. 3. The Consonant Chart.

The following diagram will serve as a summary of what we have stated concerning the classification of consonant-sounds :

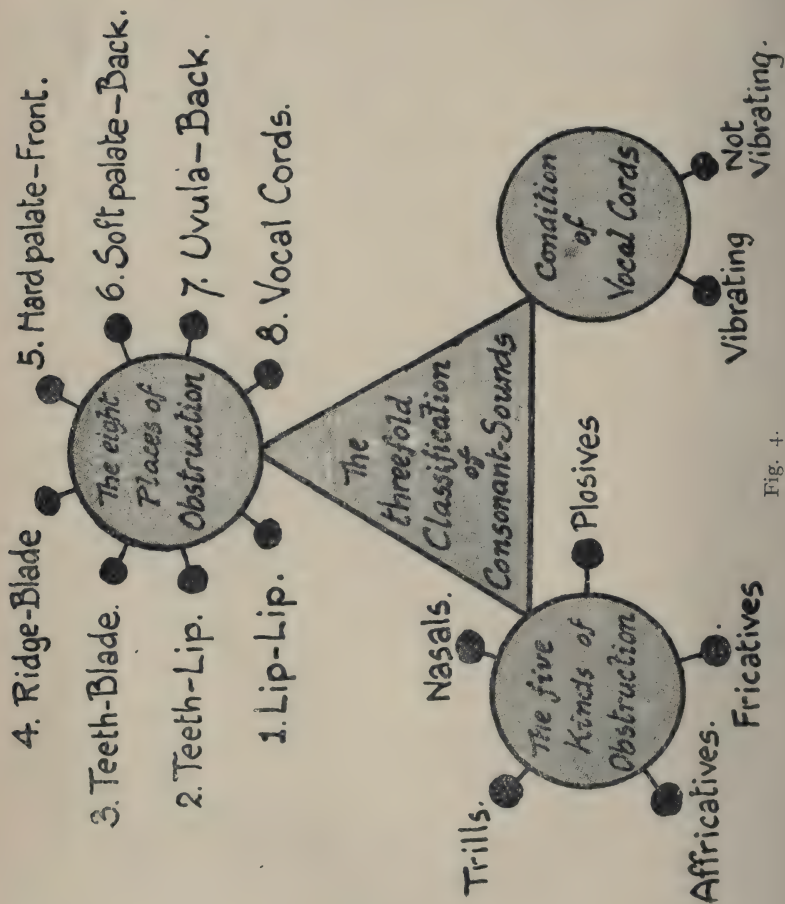


Fig. 4.

The classification of vowel-sounds is more difficult owing to the fact that instead of *three* there are *seven* bases of classification, and that their positions are less well defined.

As we have already noted, vowel-sounds are produced by a modification of the air *without any obstruction*; consequently there is no question either of the *place* nor of the *kind* of obstruction. As, moreover, all vowel-sounds are by definition voiced sounds, there is no question of their classification into voiced and voiceless.

Each of the vowel-sounds is the result of the shape of the cavity through which the voiced air is projected. The mouth cavity may vary in extent and in form according to the degree in which the front or back of the tongue is raised or lowered; it may vary according to whether the lips are rounded or spread; it may vary according to whether the nose cavity is utilized or not, and may also vary according to the degree of tenseness or laxity in which the muscles of the mouth are held. The sum of these variations results in a very large number of sounds each of which is felt to be quite distinct from the others.

The first basis of classification is the height of the tongue.*

The tongue may be so high as to make the air passage particularly narrow, or it may be so low as to render the air passage particularly large.†

The tongue is generally raised or lowered by the exercise of its own muscles; the movement is generally also accompanied by a closing or opening of the jaws. For this reason we speak of *close* and *open* vowels; it would, however, be equally clear to speak of *high* and *low* vowels.

In English the close vowels are [i:] (as in *see*), [i] (as

* Let us remember, when we speak of the tongue in connection with the production of vowel-sounds, that we mean solely the front and the back, for the blade has no influence whatever in the formation of these sounds.

† If the tongue is so high as to produce audible friction, the result will be, not a vowel, but a *consonant*.

in *give*), [u:] (as in *too*), and [u] (as in *book*). In all these cases the tongue is high and the jaws close. We may confirm this by consulting our mirror.

The open (or low) vowels are [ɑ:] (as in *ask*) and [ʌ] (as in *cut*). If we look in the mirror we shall see that they do not obstruct our view of the throat.

Between the two extreme degrees we find the semi-close vowel [e] (as in *ten*), and the semi-open vowels [æ] (as in *hat*), [ɔ] (as in *stop*), [ɔ:] (as in *all*), [ə:] (as in *first*), and [ə] (as in *again*).

The second basis of classification considers whether the *front* or the *back* of the tongue is utilized. We discover by experiment that for certain sounds the front (not the blade) of the tongue is bunched up, and that for others there is a bunching up of the back. In the former case the result is a *front* vowel, in the latter case a *back* vowel.

The English front vowels are [i:], [i], [e], and [æ].

The back vowels are [u:], [u], [ɔ:], [ɔ], and [ɑ:].

In addition to these we find three *mixed* vowels to produce which the tongue is bunched up in the middle.

The English mixed vowels are [ʌ], [ə:], and [ə].

An important point is now to be noted: From the very nature of the tongue and its muscles, the distance separating the high back and front vowels is very great, but in proportion as the tongue descends, the distance is lessened. When the tongue is at its lowest point there is no bunching up at all either in the front or back.

All the tongue positions may therefore be shown in the form of a triangle (see Figs. 5 and 6), the (inverted) apex of which shows the lowest point and the two other angles respectively the front vowel [i:] and the back vowel [u:].

The third basis of classification concerns the position of the lips. A glance at the mirror will demonstrate that for [u:], [u] and [ɔ:] the lips are rounded and somewhat pushed forward; that for [i:], [i] and [e] the lips are unrounded and in a spread position, and that for the remaining vowels the lips are in an intermediate position. In French and other languages the significance of certain words depends on whether the lips are

rounded or unrounded. This is not the case in English, consequently the position of the lips in respect of this language is of minor importance.

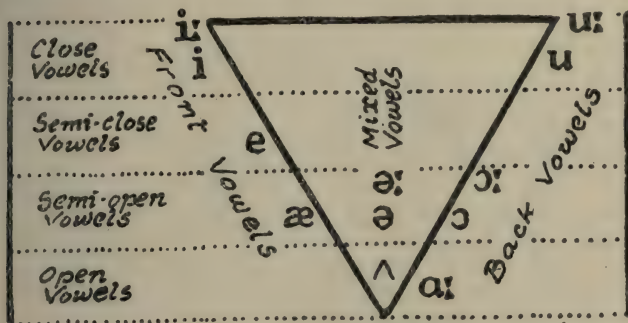


Fig. 5. The Vowel Triangle.



Fig. 6. The same triangle, showing its relation towards the mouth cavity.

The fourth basis of classification divides vowels according to whether the nasal passage is closed or open. As no English vowels are nasalized, we will merely note in passing the four French vowels in "Un bon vin blanc" are produced by the voiced breath passing simultaneously through the mouth and nose cavities.

The fifth basis concerns the degree of tenseness or laxity of the muscles of the mouth. When pronouncing [i:] (as in *see*), or [u:] (as in *too*), the muscles are felt to

be *rigid* or *tense*; when pronouncing [i] (as in *give*), or [u] (as in *book*), they are felt to be *lax*.

The English tense vowels are [i:], [ɔ:], [u:], and [ə:]; the others are articulated *laxly* and without muscular effort.

If we consider vowel-sounds purely and simply from the point of view of their *quality*, without any reference to their attributes and distribution, we can only classify them in these five different ways. For the purposes of this brief and necessarily abridged outline for the use of beginners, we shall find it convenient to include here two additional bases of classification (*length* and *pureness*). We shall call these respectively the sixth and seventh bases of classification.

The sixth basis classifies vowels according to whether they are *long* or *short*. Long vowels are indicated in a phonetic text by adding [:] as a mark of length.

The English long vowels are [i:], [ɑ:], [ɔ:], [u:], and [ə:], the rest are short.

A seventh and last basis of classification may conveniently be added by dividing vowel-sounds into two classes according to whether they are *pure* (or *single*) vowels or whether they are double vowels. The latter are produced by a rapid movement of the tongue from one point of the triangle to another. So different indeed are the double from the single vowels that they are generally considered as an entirely distinct class of sounds called *diphthongs*.

If we place the tip of the finger on the *front* (not the *blade*) of the tongue, and pronounce the word *ache*, we shall feel the movement of the tongue as it passes from the [e]-position to the [i]-position.

Similarly, if we look into the mirror while pronouncing the word *go*, we shall see that the lips are *being rounded during the emission of the vowel*.

In addition to the vowels numbered from 1 to 12, there exist three other vowels which only occur in diphthongs, viz. [ɛ], [a] and [o].

[ɛ] is about the same as the French sound of *è* in *père*.

[a] is similar to [ʌ], but is nearer to the French sound of *a* in *dame*.

[o] is not far removed from the French sound of *ô* in *côté*.

The English diphthongs (or double-vowels) are those numbered from 13 to 21. The last four (in view of the fact that the tongue passes from the sides to the centre of the triangle) may conveniently be termed the *Centring Diphthongs*.

In the two following diagrams the diphthongs are shown by means of arrows, as illustrative of the movement of the tongue during their emission.

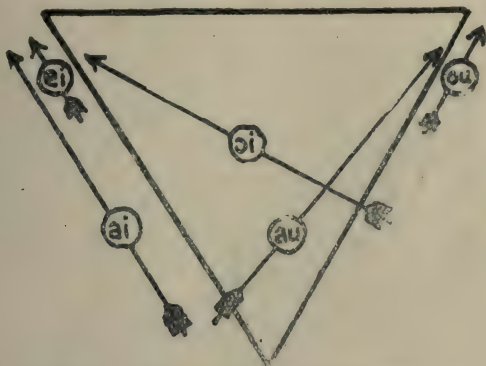


Fig. 7. The Five Chief Diphthongs.

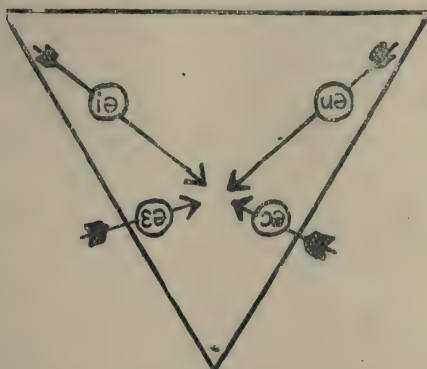


Fig. 8. The Centring Diphthongs.

We may sum up the seven bases of the classification of vowel-sounds by the following diagram, which will serve as a recapitulation of the subject :

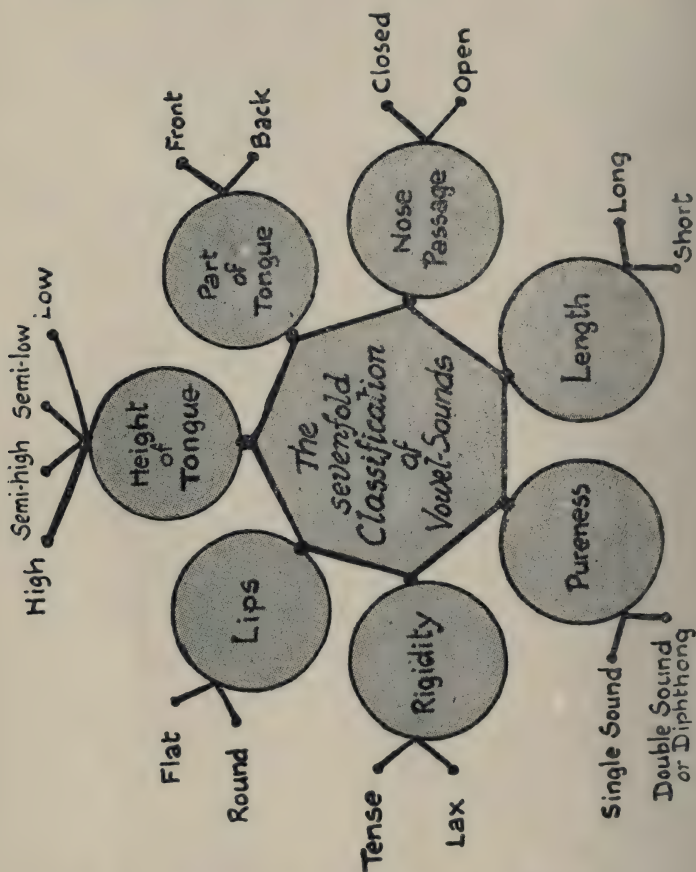


Fig. 9. The seven bases of classification of vowel-sounds (including the two vowel attributes *length* and *pureness*).

The importance of the classification of sounds lies in the fact that it enables us to diagnose (and thereby to correct) any conceivable mistake in pronunciation. A certain French student produces a sound which he imagines to be [θ]. The untrained English teacher will tell him that it is wrong, but will be unable to point out in what respect it is wrong. The trained teacher will hear at once that a *plosive* is being produced instead of the required *fricative*. He will say: "Do not explode the sound, let the air stream out softly"; the result will be the perfect [θ].

When the classification is properly understood, a large number of faulty sounds may be corrected with the greatest ease, not only by the teacher, but also by the student himself. To illustrate the point we will append a few examples chosen at random.

1. English students of French usually consider that French *u* (in *vu*) is a variety of the English vowel [u:] (sound No. 9). They should realize that an English [i:] (sound No. 1), pronounced while the lips are rounded (as for whistling) will generally result in a perfect French *u*.

2. French students of English usually consider that English [ʌ] (sound No. 10) is a sort of French *eu* (in *veuve*). They should be told that the sound in question is hardly distinguishable from French *a* in *dame*.

3. English students of French usually identify French *a* (in *dame*) either with English [æ] (sound No. 4), or with English [ɑ:] (sound No. 5). They should be told that the sound in question is hardly distinguishable from (Southern) English [ʌ] (sound No. 10).

4. Most foreign students of English have been led to consider that the vowel in *late* is a sort of French *é* (in *été*). They should know that this is a double-vowel (or diphthong), the first element of which is very often French *è* and the second of which is not far removed from French *i* in *si*.

5. When the foreign student realizes that English [r] is practically the fricative form of English [d], he will cease to produce those trills or scraping throat sounds which he has made serve as substitutes.

6. A French student may have been trying for years to produce an English [ŋ], but when he realizes that [ŋ] is to [g] what [n] is to [d], he will instantly produce the required sound.

7. When French or English students grasp the fact that German *ch* (in *ich*) is the voiceless counterpart of the sound *y* in *yes*, they will no longer substitute for this sound a [ʃ] or a [k].

8. When a Spaniard learns the nature of a plosive, and realizes that English or French [b], [d], and [g] are plosives, he will cease to replace these by their corresponding fricatives.

9. When a Dutch or Flemish student realizes that English and French [g] is a plosive, and that his native *g* (in *gaan*) is a fricative, he will understand how to direct his efforts in order to produce the required sound.

10. When the French student realizes that English [i:] is always twice as long as the French *i* (in *si*), he will no longer say [ai si] for [ai si:].

11. When English students realize the true nature of nasal sounds, they will no longer be content to replace " ð̃ b̃ ṽ bl̃ " by " œŋ bœŋ vœŋ blaŋ."

QUESTIONS ON THE PHONETIC THEORY.

The object of these questions is to ascertain whether the student has thoroughly grasped the explanations given in the preceding pages. The answers should be written by the student in the first instance without consulting the pages in question, but may subsequently be compared with this explanatory matter in order to check their accuracy.

1. If somebody asked you the question, "What is Phonetics?" what answer would you give?

2. What do you understand by the terms *known sounds* and *unknown sounds*?

3. In what way does Phonetics enable us to understand and to produce unknown sounds?

4. Is it true to say that phonetics replaces imitation by understanding?

5. What answer would you give to anybody who stated that he wished to learn about English pronunciation but not about English phonetics?

6. When we are told that the English letter *a* has five regular pronunciations (viz. : (1) as in *day*, (2) as in *hat*, (3) as in *all*, (4) as in *ask*, (5) as in *ago*), is this information of a phonetic or of an orthoepic nature?

7. Quote one or more current misapprehensions concerning the nature of Phonetics.

8. On what grounds can we explain the fact that many people consider the phonetic alphabet difficult or complicated?

9. When we are told that the English letter *r* is pronounced before a vowel but not otherwise, is this information of a phonetic or of an orthoepic nature?

10. What answer would you give to anybody who said: "Phonetics—oh yes, that is a sort of spelling reform—write as you speak"?

11. What is really meant by a difficult alphabet? What is the difference between a difficult alphabet and an easy one?

12. When we are told that the vowel in *see* is long and tense, is this information of a phonetic or of an orthoepic nature?

13. What do you understand by "a catalogue of sounds"?

14. How is it that so many English people are unable to produce the French *u* in *vu*?

15. Why must we use a phonetic notation when writing about sounds or in explaining the differences between various sounds?

16. With what may a phonetic notation be aptly compared? What analogies does it suggest?

17. On what grounds is it generally recommended to students to use the alphabet of the International Phonetic Association?

18. Why are "strange letters" (such as [ə], [θ] or [ŋ]) indispensable in a simple phonetic notation?

19. Show by examples that the traditional English and French spellings of words are unphonetic, i.e. that English and French letters do not represent with any consistency English and French sounds.

20. Why is the Russian alphabet difficult?

21. How many "strange letters" are there in the phonetic alphabet as applied to English?

22. Express concisely the difference between the old-fashioned and the modern points of view with regard to the teaching of pronunciation?

23. Express the same difference more amply, comparing either or both methods with that naturally adopted by the child learning his mother-tongue.

24. In what cases may we recommend a student to pay no attention whatever to phonetics?

25. Show why the study of pronunciation on an orthoepic basis is a vicious and harmful proceeding.

26. Define the term *orthoepy*.
27. What is the basis of speech sounds?
28. What is the difference between a vowel-sound and a vowel-letter?
29. Into what two main divisions may all speech sounds be classed?
30. How many vowel-letters are there in the English alphabet? And how many simple vowel-sounds in the English phonetic system?
31. Is the first element of the English word *use* a consonant or a vowel?
32. A classical orthoepic rule tells us that the indefinite article *a* becomes *an* when the following word begins by a vowel. How does this agree with the fact that we write and say *a unit* and not *an unit*?
33. Which are the 12 English simple vowel-sounds? Give one example of each in the form of a monosyllabic word.
34. Why are untrained English people generally unaware that many of these vowel-sounds exist?
35. Which are the nine compound-vowels (or diphthongs)? Give an example of each.
36. Which of these are generally unrecognised by English people, and why?
37. Why is it generally unnecessary to make use of the symbol [ɪ]?
38. Which two English compound consonants require special attention, and why?
39. Name the principal organs of speech.
40. Define the terms *blade*, *vocal chords*, *soft palate*, *front*, *nasal cavity*, *ridge*, and *back*.
41. What is the function of the uvula in connection with English sounds?
42. How is the passage to the nasal cavity opened and closed?
43. Make a copy from memory of the diagram showing the various vocal organs.
44. What is a consonant-sound?
45. How many well-defined points are there at which an obstruction may be formed?

46. Name each of these.
47. Illustrate them by means of a diagram.
48. In how many ways may we classify consonants ?
49. What is the first basis of classification of consonants ?
50. Give examples of consonants characteristic of each of the obstruction places.
51. Are any English consonants formed by means of a double obstruction ?
52. What is the second basis of the classification of consonants ?
53. Define a plosive consonant.
54. Which are the English plosive consonants ?
55. Define a nasal consonant.
56. Which are the English nasal consonants, and which of these (if any) do not exist in French ?
57. Describe the formation of [m], [n] and [ŋ].
58. Define incomplete obstructions.
59. Which are the English simple fricatives ?
60. Describe the formation of [f], [θ] and [r].
61. Which are the sibilant fricatives ?
62. Describe the formation of [ʃ].
63. Which are the lateral fricatives ?
64. Describe the formation of [l].
65. How many trills exist in English ?
66. Which is the third basis of classification of consonants ?
67. What is *voice* ?
68. What is the difference between [f] and [v] ?
69. May *all* consonants be voiced or voiceless ?
70. Is the English [r] voiced ?
71. Give the voiceless equivalents of [b], [ð], [z], and [dʒ].
72. Give the voiced equivalents of [s], [f], [k], and [ʃ].
73. Construct a diagram containing all the English consonants.
74. What are vowel-sounds ?
75. How many bases of classification may conveniently be used in studying vowel-sounds ?

76. What is the cause of the difference between any one vowel and another ?
77. What is the first basis of classification of vowel-sounds ?
78. What part or parts of the tongue are used in the production of different sorts of vowels ?
79. In what way does the blade affect the quality of vowels ?
80. What happens when the tongue is so high as to produce audible friction ?
81. How do we generally raise and lower the tongue ?
82. Pronounce [i:ɑ:i:ɑ:] and describe what happens.
83. Which are the English close (or high) vowels ?
84. Which are the English open (or low) vowels ?
85. Which are the English semi-open and semi-close vowels ?
86. What is the second basis of classification of vowels ?
87. Describe the formation of [i:] and of [u:].
88. Is [i:] a front or a back vowel ?
89. What do you understand by a front vowel ?
90. Is [ə:] a front or a back vowel ?
91. Place the tip of your finger on the front of the tongue ; pronounce [i:u:i:u:] and describe what happens.
92. How many mixed vowels are there in English ?
93. Which is the greater distance ; that between [i:] and [u:], or that between [æ] and [ɔ] ?
94. Give the reason for your last answer.
95. Explain why the vowels are placed on a triangle and not on a square.
96. Draw the vowel triangle and indicate the positions of the English vowels.
97. What is the third basis of classification of vowels ?
98. Look in the mirror ; pronounce [i:u:i:u:] and describe what you see.
99. Which are the English rounded vowels ?
100. What is the fourth basis of classification of vowels ?
101. Why is this basis of little utility when studying English ?

102. Do you know any language in which certain vowels are formed by the aid of the nasal cavity

103. What is the fifth basis of classification of vowels ?

104. What do you understand by the terms *tense* and *lax* ?

105. Which are the English tense vowels ?

106. Which is the sixth basis of the classification of vowels ?

107. By what sign do we mark *length* ?

108. What do we mean by *long vowels* ?

109. What is the last basis of classification of vowels ?

110. What do you understand by the term *compound-vowel* ?

111. What are compound-vowels generally called ?

112. Place the finger-tip on the front of the tongue, pronounce the English word *ache*, and describe carefully what happens.

113. Look in the mirror ; pronounce the English word *go* and describe carefully what you see.

114. What is the peculiarity in the English language about the sounds [a], [o] and [ɛ] ?

115. To which diphthongs may we apply the term *centring*, and why ?

116. Why are diphthongs represented on the triangle by arrows ?

117. Draw the vowel triangle and represent thereon the five chief diphthongs.

118. What term may we use to designate the diphthongs [ei] and [ai] ?

119. What term may we use to designate the diphthong [ou] ?

120. Draw the vowel triangle and represent thereon the four centring diphthongs.

121. What are the three bases of the classification of consonants ?

122. What are the seven bases of the classification of vowels ?

123. Why is it important to know how sounds are classified ?

PART II.

SYSTEMATIC ARTICULATION EXERCISES.

(Arranged more especially for the use of foreign students).

Before attempting the reproduction of English sounds (presuming English to be the foreign language), first learn to *isolate* various sounds of your own language. The object in so doing is twofold :

(a) To overcome that shyness and nervous hesitation which in so many cases prevents students from producing that long and steady emission of sound which is the first essential in systematic phonetic work.

(b) To become perfectly conscious of the *known* sounds and to gain perfect command over them as a preparation for the more difficult work of producing *unknown* sounds.

While performing the following exercises the student should note the positions of the vocal organs ; to this effect he should make constant use of the mirror in order to *see* what is happening, and of his finger-tip in order to *feel* what is happening. Systematic observation and experiment will eventually give the student an almost perfect command over his organs of articulation.

1. Articulate steadily and distinctly such of the following sounds* as happen to be known to you, giving a duration to each of at least four seconds :

ɑ:, i:, u:, e:, o:, m:, n:, w:, v:, z:, ʒ:, j:, l:, f:, s:, ʃ:.

2. Articulate steadily and distinctly such of the following plosives as happen to be known to you. Each sound should be repeated eight times in four seconds :

p-p-p-p-p-p-p-p, t-t-t-t-t-t-t-t, k-k-k-k-k-k-k-k,
b-b-b-b-b-b-b-b, d-d-d-d-d-d-d-d, g-g-g-g-g-g-g-g.

* In this and the following exercises, be very careful to pronounce the sounds themselves, and not the name of the letter representing them.

In exercises 3 to 15, should any of the three vowels treated be a sound unknown to the student, it may be replaced by the nearest known sound.

3. Articulate α — i :, α — i :, α — i :, giving a duration of two seconds to each sound. Observe what movement takes place (*a*) by consulting the mirror, and (*b*) by placing the thumb underneath the chin.

4. Articulate i — α :, i — α :, i — α :.

5. Articulate i — u :, i — u :, i — u :.

Place the tip of the finger on the *front* (not the *blade*) of the tongue to ascertain what happens during exercises 6 and 7.

6. Articulate u — i :, u — i :, u — i :.

7. Articulate α — u :, α — u :, α — u :.

8. Articulate u — α :, u — α :, u — α :.

[α], [i] and [u] are the three primary vowels, as they represent the extreme limits of the radius of the tongue.

Nos. 9 to 14 to be repeated at least three times each.

9. i — α — u :.

10. α — u — i :.

11. u — i — α :.

12. u — α — i :.

13. i — u — α :.

14. α — i — u :.

(Similar exercises may be devised by ringing the changes on [α :], [i :], [u :], [e :], and [o :], or their nearest "known" neighbours.)

Independently of any consideration of known or unknown sounds, and without any reference to phonetic symbols or to alphabetic letters, the pupil should now practise the formation of unvoiced fricative sounds in all the possible places of obstruction. In each case a duration of not less than 4 seconds is essential.

15. Close the lips loosely and pass the air between them. The result will be the "lip-lip fricative." (This is the "Japanese *f*," the phonetic symbol for which is *F*.)

16. Bring the lower lip against the edge of the upper teeth and pass the air through the obstruction. (This will result in an ordinary *f*.)

17. Bring the upper lip against the edge of the lower

teeth and pass the air through the obstruction. This position (as far as we know) is not utilized in any language but the result will be a sound almost identical with that of *f*. The value of this and the following four exercises consists in causing the pupil to produce sounds on a physical or organic basis instead of on a visual or graphic basis. The pupil will grasp the fact (so obvious to phoneticians) that the sounds of speech are merely particular noises produced by certain dispositions of the organs of speech.

18. Place the edge of the tongue-blade lightly against the back of a knife or flat ruler and pass the air through the obstruction. The result will be a sound similar to [f] or [θ].

19. Replace the ruler or knife by the upper lip. Bring the edge of the tongue-blade along the upper lip and pass the air through the obstruction. The resultant sound will also be similar to [f] or [θ].

20. Replace the upper lip by the edge of the upper front teeth. This will produce the sound [θ].

21. As a variant of 20, let the whole of the tongue-blade be protruded and held between the upper and lower teeth, and breathe the air past the obstacle. The result will be a (somewhat exaggerated) [θ].

All the operations from 15 to 21 have been carried out in positions which enable them to be *seen*; the sense of sight has been used as an auxiliary to the sense of touch. The next eight exercises have reference to positions not so easily checked by the eyes.

22. Place the edge of the tongue-blade lightly against the teeth-ridge and pass the air through the obstruction. The result will be the sound of the English unvoiced [r]. Care must be taken to use the *edge* only of the tongue-blade. If the blade is so disposed as to present a more or less *flat surface* against the ridge, the result will be the shriller sound of [ʃ].

23. Bring the *front* (not the *blade*) of the tongue into loose contact with the hard palate and pass the air through the obstacle. This is a more difficult operation for a beginner, but if performed properly should produce

the unvoiced form of [j] (the unvoiced form of the sound *y* in *yes*). This sound (represented by the phonetic symbol [ç]) is the German sound of *ch* in *ich*. It is often heard as a substitute for English [h] when followed by [j].

24. Bring the back of the tongue into loose contact with the soft palate and pass the air through the obstacle. This is another operation rather difficult for the beginner, but a valuable exercise in acquiring "consciousness of articulation." The place of obstruction is that of [k]. Observe in the mirror the formation of the [k]-obstruction, then, instead of exploding it, cause the air to flow past the obstacle. The result (represented by the phonetic symbol [x]) is the German sound of *ch* in *Bach*.

25. If voiced air flows past an obstruction formed at the extreme back of the soft palate (in Obstruction Place 7) the result will be a sound (represented by the phonetic symbol [ʁ]), which many French people use as a substitute for the uvular trilled [R].

26. Open the mouth (as if to produce [ɑ]) and breathe. The stream of air may be heard flowing past the vocal chords, and constitutes the sound of which the phonetic symbol is [h].

27. Refer to exercise 22, and so modify the position of the blade that a whistling or hissing sound is heard. This is the sound [s].

28. Another sort of modification of the position of the blade will result in [ʃ].

29. Press the tip of the blade firmly against the middle of the teeth-ridge. Pass the air round the sides of the obstacle, and an unvoiced [ʃ] will be produced.

Voicing and unvoicing practice. The student should now go through a course of exercises in order to acquire such control over the vocal chords that he can without any hesitation voice any voiceless consonant or unvoice any voiced consonant.

30. Produce (while the teacher beats 8 seconds) the sound [f]. Again. Again. Now again, but this time, at the 5th beat, *add the voice*, that is to say, *sing a note*. The result will be [ffffvfvv].

31. Produce [v] for the space of 8 seconds. Again, but this time, at the 5th second, let the musical note cease. The result will be [vvvvffff].

This exercise may be applied to all the fricatives in exercises 15 to 29.

Exercises 32 to 37 are intended to cause the pupil to feel the mechanism of nasal consonants.

32. Close the lips and sing a note. The result will be [m].

33. Form Obstruction No. 2 and sing a note. The result will be a nasal-sound for which the phonetic symbol is [ŋ]. This sound is sometimes heard as the pronunciation of English *m* in the word *triumph*.

34. Form obstruction No. 3 and sing a note. The result will be a nasal-sound for which no particular symbol has so far been chosen. This sound is often heard as the pronunciation of English *n* in the word *ninth*.

35. Form obstruction No. 4 and sing a note. The result will be English [n].

36. Form obstruction No. 5 and sing a note. The result will be the sound of French *gn* in *agneau*, for which the phonetic symbol is [ɲ].

37. Form obstruction No. 6 and sing a note. The result will be the sound represented by [ŋ].

PART III.

SYSTEMATIC EXERCISES ON ENGLISH WORDS.

The objects of this series of 80 exercises are :

(a) To serve as a transition between articulation exercises and exercises based on connected texts (such as fluency exercises, phonetic reading and dictation).

(b) To ensure the fluent and accurate pronunciation of the most common English words.

From these the student will pass to "Fluency Exercises," i.e. the fluent and accurate production of English sentences. The author's 100 *Substitution Tables** are intended for this purpose.

Each of these 80 exercises should start by "isolating" the sound which is the object of study. In the case of the plosives, this isolation should consist of producing the sound eight times in four seconds. In all the other cases the sound should be emitted steadily and without interruption during the whole of the four seconds.

In each case the analysis should be read and compared with the various diagrams contained in Part I.

The 20 words should then be read distinctly ; in the first instance each word will be pronounced after the teacher ; at a subsequent moment the whole list should be read by the student without oral prompting.

The same process applied to the corresponding lists in orthographic form (pages 63 to 85) will constitute the transition from phonetic to the traditional spelling, and will act as a powerful corrective against the tendency to pronounce words as they are spelt.

* Published by Heffer, Cambridge.

The 80 exercises are divided into four series :

SERIES A (numbered from 1 to 46), consisting of the catalogue of English sounds (including 9 double-vowels and 2 double-consonants).

SERIES B (numbered from 47 to 52), consisting of six useful sets of words containing (final or initial) weak syllables.

SERIES C (numbered from 53 to 80), consisting of 28 groups of pairs of words likely to be confused by foreign students of English on account of their similarity.

SERIES D, consisting of 17 transcription exercises.

SERIES A.

THE CATALOGUE OF ENGLISH SOUNDS.

We have said that the simplest way to learn about the sounds of a given language is to consult a catalogue of them, in which each appears in its proper place, is described, explained and distinguished from its neighbours.

The following is a catalogue of the English sounds, both single and double. In each case we give the reference number, symbol and definition of the sound, and twenty of the most characteristic monosyllabic words containing it. Blank spaces have been provided so that students of any nationality may add memoranda of personal rather than of general interest and utility.

1.	2.	3.
i:	i	e
<i>Vowel.</i> <i>Front.</i> <i>Close.</i> <i>Tense.</i> <i>Long.</i>	<i>Vowel.</i> <i>Front.</i> <i>Close.</i> <i>Lax.</i> <i>Short.</i>	<i>Vowel.</i> <i>Front.</i> <i>Semi-close.</i> <i>Lax.</i> <i>Short.</i>
<i>Notes.</i>	<i>Notes.</i> In accordance with the system of simplified notation, the symbol for this vowel is given as [i]. In a more precise notation the symbol [i̞] is used in order to distinguish it from the vowel in the French word <i>si</i> .	<i>Notes.</i> In accordance with the system of simplified notation, the symbol for this vowel is given as [e]. In a more precise notation the symbol [e̞] is used to distinguish it from the vowel in the French word <i>clé</i> .
biɪ bi:n di:p fri: gri:n ki:p mi:t si: stri:t wi:k i:t li:v mi:n pli:z pli:zd ri:d spi:k ti: pi:s ki:	big did fil giv hiz if il in it kwik lift liv mis sins sit siks stik stil til bild	best els end get help left men nekst send tel ten twelv wel went wen jes et frend sed sez

4.	5.	6..
æ	ɑ:	ɔ
<i>Vowel.</i> <i>Front.</i> <i>Semi-open.</i> <i>Lax.</i> <i>Short or Long.</i>	<i>Vowel.</i> <i>Back.</i> <i>Open.</i> <i>Lax.</i> <i>Long.</i>	<i>Vowel.</i> <i>Back.</i> <i>Semi-open.</i> <i>Lax.</i> <i>Short.</i>
<i>Notes.</i>	<i>Notes.</i>	<i>Notes.</i> In accordance with the system of simplified notation, the symbol for this vowel is given as [ɔ]. In a more precise notation the symbol [ɔ̃] is used in order to distinguish it from the vowel in the French word <i>fort</i> .
bæk bæ:d bæ:g bæŋk blæk dræŋk fækt fæt flæ:g flæt gæs glæ:d hæd] hæz hæv] mæ:n sænd stænd træm plæd	ɑ:sk kɑ:nt fɑ:st grɑ:s hɑ:f lɑ:st ɑ:m kɑ:d kɑ:t dɑ:k fɑ: hɑ:d pɑ:k pɑ:t stɑ: stɑ:t ɑ:nt lɑ:f klɑ:k hɑ:t	bɔks klɔk kɔst dɔg drɔp gɔt hɔt nɔk lɔk] lɔst lɔt nɔt ɔn pɔnd sɔft spɔt stɔp wɔnt wɔf wɔt

7.	8.	9.
ɔ:	u	u:
<i>Vowel.</i> <i>Back.</i> <i>Semi-open.</i> <i>Rounded.</i> <i>Tense. Long.</i>	<i>Vowel.</i> <i>Back.</i> <i>Close.</i> <i>Rounded.</i> <i>Lax. Short.</i>	<i>Vowel.</i> <i>Back.</i> <i>Close.</i> <i>Rounded.</i> <i>Tense. Long.</i>
<i>Notes.</i>	<i>Notes.</i> In accordance with the system of simplified notation, the symbol for this vowel is given as [u]. In a more precise notation the symbol [ʊ] is used in order to distinguish it from the vowel in the French word <i>bout</i> .	<i>Notes.</i>
ɔ:l kɔ:l fɔ:l smɔ:l wɔ:k wɔ:l sɔ:s lɔ: sɔ: wɔ:m fɔ:k hɔ:s sɔ:t bɔ:d bɔ:t ɔ:t tɔ:t jɔ:z ɔ:f tɔ:dz	buk kuk fut gud huk luk fuk tuk wud wul ful pul puʃ put kud ʃud wud wulf buʃ bul	bu:t mu:n ru:m sku:l su:n spu:n tu: dʒu:n ru:l blu: tru: fru:t du: lu:z mu:v tu: hu: su:p ʃu: θru:

9a.	10.	11.
ju:	ʌ	ə:
<i>(Identical with 9, but preceded by the consonant [j] ; see No. 37.)</i>	<i>Vowel. Mixed. Open. Lax. Short.</i>	<i>Vowel. Mixed. Semi-close. Tense. Long.</i>
<i>Notes.</i>	<i>Notes.</i> In a less precise notation this symbol may be replaced by [a].	<i>Notes.</i>
kju:b dju:k dju:p fju:z hju:dʒ mju:l tju:b tju:n ju:s ju:z kju: dju: ju: ju:θ vju: dju: fju: nju: nju: sju:t	bʌt kʌp kʌt mʌst ʃʌt sʌn ʌp ʌs kʌm dʌn lʌv nʌn wʌns wʌn sʌm sʌn tʌtʃ jʌŋ blʌd dʌz	bæ:n hæ:t pæ:s tɛ:n bæ:d fæ:st gə:l ʃæt hæ:d læ:n jə: hæ:z və:b wə:ʃ wɛ:nt wɛ:d wɛ:k wɛ:ld wɛ:s wɛ:st

12.	13.	14.
ə	ei	ou
<i>Vowel.</i> <i>Mixed.</i> <i>Semi-close.</i> <i>Lax.</i> <i>Short.</i>	<i>Diphthong</i> <i>(or Double-vowel).</i> <i>Front.</i> <i>[e] and [i] in rapid</i> <i>succession with-</i> <i>out interruption.</i>	<i>Diphthong</i> <i>(or Double-vowel).</i> <i>Back.</i> <i>[o] and [u] in rapid</i> <i>succession without</i> <i>interruption.</i>
Notes.	Notes.	Notes.
ə ən ðə wəz wə kən məst ðəm əs əz ət fə frəm əv tə ənd bət səm ðən ðət	keim feis leit meik neim pleit teik peid weit dei mei pei plei sei stei vein eit grei breik greit	kould gou houm houp nou ould sould spouk stoun bout koul soup nou lou brout mouv soul sou tou dou

15.	16.	17.
ai	au	oi
<p><i>Diphthong</i> (or <i>Double-vowel</i>). <i>Front.</i> [a] and [i] in <i>rapid succession</i> <i>without interrup-</i> <i>tion.</i></p>	<p><i>Diphthong</i> (or <i>Double-vowel</i>). <i>Front to Back.</i> [a] and [u] in <i>rapid succession</i> <i>without interrup-</i> <i>tion.</i></p>	<p><i>Diphthong</i> (or <i>Double-vowel</i>). <i>Back to Front.</i> [ɔ] and [i] in <i>rapid succession</i> <i>without interrup-</i> <i>tion.</i></p>
<p><i>Notes.</i></p>	<p><i>Notes.</i></p>	<p><i>Notes.</i></p>
<p>faind faiv ai laik main nais kwait taim wait rait hai lait nait rait bai bai mai wai ai! tai</p>	<p>klaud kaunt kraun daut faund haus laud maus mauθ aut raund saund staut braun kauꞤ kraud hauꞤꞤ nau taun plau</p>	<p>boil tʃois koin dʒoin loin oil roil soil spoil spoilt toi vois boiꞤ dʒoi noiz</p>

18.	19.	20.
iə	ɛə	ɔə
<i>Diphthong (or Double-vowel). Centring. [i] and [ə] in rapid succession without interrup- tion.</i>	<i>Diphthong (or Double-vowel). Centring. [ɛ] and [ə] in rapid succession without interrup- tion.</i>	<i>Diphthong (or Double-vowel). Centring. [ɔ] and [ə] in rapid succession without interrup- tion.</i>
<i>Notes.</i>	<i>Notes.</i>	<i>Notes.</i> Some English speakers make no difference between sound 20 and sound 7. They would pro- nounce the words below as [bɔ:, mɔ:, nɔ:], etc. See 58.
iə biəd kliə diə fiə hiə niə tiə biə tʃiə diə kwɪə hiə piə wiəd	ɛə tʃɛə fɛə hɛə pɛə stɛəz bɛə pɛə swɛə tɛə wɛə kɛə ʃɛə skwɛə ðɛə ðɛəz mɛə prɛə ðɛə wɛə	bɔə mɔə nɔə ɔə pɔə ʃɔə sɔə stɔə tɔə bɔə ɔə rɔə dɔə flɔə wɔə fɔə pɔə* jɔə* dʒɔə ʃɔə*

The three words marked * are frequently pronounced as [puə], [juə] and [ʃuə].

21.	22.	23.
uə	p	b
<p><i>Diphthong (or Double-vowel). Centring. [u] and [ə] in rapid succession without interrup- tion.</i></p>	<p><i>Consonant. Plosive. Obstruction Place I. (Lip-lip.) Unvoiced.</i></p>	<p><i>Consonant. Plosive. Obstruction Place I. (Lip-lip.) Voiced.</i></p>
Notes.	Notes.	Notes.
<p>puə muə tuə ʃuə truə kjuə pjuə fjuə</p>	<p>peid pəə pɑ:t pei pi:s pleit plei pli:z pul pjuə puʃ put kʌp drɒp help houp ləmp soup su:p ʌp</p>	<p>bæk bæ:d bæ:g bi: beə bi:n biə best big blæk buk bur:t bo:t bɒks bæ:n buʃ bʌt bai kæ:b rʌb</p>

24.	25.	26.
t	d	k
<i>Consonant. Plosive. Obstruction Place 4. (Ridge-blade.) Unvoiced.</i>	<i>Consonant. Plosive. Obstruction Place 4. (Ridge-blade.) Voiced.</i>	<i>Consonant. Plosive. Obstruction Place 6. (Soft Palate-back.) Unvoiced.</i>
<i>Notes.</i>	<i>Notes.</i>	<i>Notes.</i>
teik ti: ten taim tu: tuk tʌtʃ taun tə:n tu: best bout bu:t bʌt eit fæt mi:t put sɔ:t wɔt	dei diə di:p di:d du: dʌz dɒg dʌn drai dʌst kɑ:d end faɪnd hə:d meid ould peid red send wə:d	kɔ:l kɑ:d klin kould kʌm kʌp ki:p ki: kwik kwait ɑ:sk bæk blæk buk nɒk pɑ:k stik: spi:k wɔ:k wɔ:k

27.	28.	29.
g	m	n
<i>Consonant.</i> <i>Plosive.</i> <i>Obstruction</i> <i>Place 6.</i> <i>(Soft Palate-back.)</i> <i>Voiced.</i>	<i>Consonant.</i> <i>Nasal.</i> <i>Obstruction</i> <i>Place 1.</i> <i>(Lip-lip.)</i> <i>Voiced.</i>	<i>Consonant.</i> <i>Nasal.</i> <i>Obstruction</i> <i>Place 4.</i> <i>(Ridge-blade.)</i> <i>Voiced.</i>
Notes.	Notes.	Notes.
gæs get gə:l giv glæ:d glɑ:s glʌv gou gud gɔt grɑ:s grɪ:n grei bæ:g big dig dɔg fɔg ræg veig	mæ:n meik mei mi:n mi:t men milk main mis mu:n mai ɑ:m houm læm læmp neim ru:m seim sɑm wɔ:m	nɔk nou neim neks† nais nait nain nou nʌn nau bi:n bɛ:n dʒu:n mæ:n mi:v men send skin su:n stoun

30.	31.	32.
ŋ	w	f
<i>Consonant.</i> <i>Nasal.</i> <i>Obstruction</i> <i>Place 6.</i> <i>(Soft Palate-back.)</i> <i>Voiced.</i>	<i>Consonant.</i> <i>Fricative.</i> <i>Double obstruction</i> <i>Places 1 & 6.</i> <i>(Lip-lip and Soft</i> <i>Palate-back.)</i> <i>Voiced.</i>	<i>Consonant.</i> <i>Fricative.</i> <i>Obstruction</i> <i>Place 2.</i> <i>(Teeth-lip.)</i> <i>Unvoiced.</i>
<i>Notes.</i>	<i>Notes.</i>	<i>Notes.</i>
brɪŋ hæŋ kɪŋ lɔŋ lʌŋz rɔŋ sɪŋ sɔŋ sprɪŋ strɪŋ θɪŋ wɪŋ jʌŋ drɪŋk drʌŋk ɪŋk pɪŋk θæŋk θɪŋk trʌŋk	weɪt wɔ:k wɔ: wɔ:m wel west wet wɔt wen wɛə wɪtʃ waɪ wɪl waɪn wud wul wə:d wə:k wə:ld wə:s	feɪs fɛə fɔ:l fɔ:lt fi:ld fɪl faɪnd fə:st faɪv fu:d fut fɔ:k faund fɔ:l kɔf hɑ:f ɪf lɑ:f left ɔ:f

33.	34.	35.
v	θ	ð
<i>Consonant. Fricative. Obstruction Place 2. (Teeth-lip.) Voiced.</i>	<i>Consonant. Fricative. Obstruction Place 3. (Teeth-blade.) Unvoiced.</i>	<i>Consonant. Fricative. Obstruction Place 3. (Teeth-blade.) Voiced.</i>
<i>Notes.</i>	<i>Notes.</i>	<i>Notes.</i>
veig vein va:st vein və:b və:s vju: vois vout vaul faiv giv glʌv hæv li:v liv lʌv feiv twelv weiv	θik θi:f θin θiŋk θrou hɑ:θ ə:θ eitθ fifθ fɔ:θ helθ mʌnθ mauθ nainθ nɔ:θ siksθ sauθ tenθ tu:θ tru:θ	ðæt ðeə ðem ðəm ðen ðeə ði:z ðei ðeə ðis ðouz ðu ðʌs beið bri:ð leið louð su:ð wið

36.	37.	38.
r	j	h
<i>Consonant.</i> <i>Fricative.</i> <i>Obstruction</i> <i>Place 4. (Ridge-blade.) Voiced.</i>	<i>Consonant.</i> <i>Fricative.</i> <i>Obstruction Place 5 (Hard Palate-front) Voiced.</i>	<i>Consonant.</i> <i>Fricative.</i> <i>Obstruction Place 8 (Vocal chords.) Unvoiced.</i>
<i>Notes.</i> In accordance with the system of simplified notation, the symbol for this sound is given as [r]. In a more precise notation the symbol [ɹ] is used in order to distinguish it from the front-trilled (Italian) [r].	<i>Notes.</i>	<i>Notes.</i>
rɛə ræt red ritʃ rait rouz rɔŋ briŋ braun gri:n graund kri:m fri: frenʃ frend pres stri:t Øri: tru: trai	jɔt jɑ:d jə: jes jet jɔ:k ju: jʌŋ jɔ: jɔ: jɔ:z fju: nju: sju:t kju:b hju:dʒ tju:b dju:kʃ fju:zʃ tju:n	hæ:f hɛə hæm hænd hæ:d hæ:m hæ:t hæv hei hai hil hould hau hu: hu:z hi: hi:l hiə hit hiə

39.	40.	41.
s	z	ʃ
<i>Consonant.</i> <i>Sibilant Fricative.</i> <i>Obstruction</i> <i>Place 4.</i> <i>(Ridge-blade.)</i> <i>Unvoiced.</i>	<i>Consonant.</i> <i>Sibilant Fricative.</i> <i>Obstruction</i> <i>Place 4.</i> <i>(Ridge-blade.)</i> <i>Voiced.</i>	<i>Consonant.</i> <i>Sibilant Fricative.</i> <i>Obstruction</i> <i>Place 4.</i> <i>(Ridge-blade.)</i> <i>Unvoiced.</i>
<i>Notes.</i>	<i>Notes.</i>	<i>Notes.</i>
si:s sel seim sei si: sel send said sins sou feis fra:ns gra:s hɔ:s leis lu:s nais rais siks wɔ:s	zi:l zest ziŋk zoun zu: tʃi:z dʌz gouz hɛ:z hiz nouz lu:z nɔ:z nouz auəz sez saiz steəz jə:z jɔ:z	ʃeik ʃeip ʃeə ʃɑ:p ʃi:p ʃi:t ʃel ʃain ʃip ʃu: ʃɔp ʃɔ:t ʃou ʃʌt kæʃ diʃ fiʃ puʃ wiʃ wɔʃ

42.	43.	44.
3	l	ɫ
<p><i>Consonant.</i> <i>Sibilant Fricative.</i> <i>Obstruction</i> <i>Place 4.</i> <i>(Ridge-blade.)</i> <i>Voiced.</i></p>	<p><i>Consonant.</i> <i>Lateral Fricative.</i> <i>Obstruction</i> <i>Place 4.</i> <i>(Ridge-blade.)</i> <i>Voiced.</i></p>	<p><i>Consonant.</i> <i>Lateral Fricative.</i> <i>Obstruction Place 4</i> <i>(Ridge-blade.)</i> <i>(with back of tongue</i> <i>in the u-position.</i> <i>Voiced.</i></p>
<p><i>Notes.</i></p>	<p><i>Notes.</i></p>	<p><i>Notes.</i> In a less precise notation the symbol [ɫ] may be replaced by that of sound 43.</p>
<p>[ʒ] is to be found in a few dissyllabic and polysyllabic words, among which the most important are:</p> <p>'pleʒə 'treʒə 'meʒə 'leʒə 'æʒə ə'keiʒn 'viʒn di'siʒn i'lju:ʒn 'fju:ʒn in'veiʒn ə'lju:ʒn</p>	<p>leis la:st leit lə: li:f lə:n li:v left leg lend let lid laif lift laik liv lək luk lu:z lou</p>	<p>ɔ:ɫ beɫ hiɫ kɔ:ɫ kouɫ fi:ɫ fi:tɫ fuɫ gouɫd heɫp hiɫ houɫd ouɫd peit puɫ ru:ɫ smɔ:tɫ smet teɫ weɫ</p>

45.	46.
tʃ	dʒ
<p><i>Double Consonant. Affricate. Obstruction Place 4. (Ridge-blade.) Unvoiced.</i></p>	<p><i>Double Consonant. Affricate. Obstruction Place 4. (Ridge-blade.) Voiced.</i></p>
<p><i>Notes.</i></p>	<p><i>Notes.</i></p>
<p>tʃɑ:ns tʃɑ:m tʃi:p tʃi:z tʃek tʃes tʃaɪld tʃɔ:is tʃu:z tʃɒp kætʃ tʃə:tʃ i:tʃ mɑ:tʃ mætʃ mʌtʃ ri:tʃ ritʃ ti:tʃ tʌtʃ</p>	<p>dʒem dʒə:m dʒin dʒæm dʒu: dʒɔ:in dʒouk dʒɔi dʒʌg dʒu:s dʒʌmp dʒu:n dʒʌst eidʒ keidʒ dʒʌdʒ lɑ:dʒ peidʒ si:dʒ wedʒ</p>

SERIES B.

CONSISTING OF SIX USEFUL SETS OF WORDS CONTAINING (FINAL OR INITIAL) WEAK SYLLABLES.

The sign ['] appearing in all the words of this series indicates that the syllable which follows takes the stress. For the purposes of these exercises *stress* must be taken to mean not only a stronger emission of air but also a high musical pitch.

47.	48.	49.
<i>Final ə</i> (See 12).	<i>Final i</i> (See 2).	<i>Syllabic ŋ</i> (See 28).
<i>Notes.</i>	<i>Notes.</i>	<i>Notes.</i> In a less precise notation the small stroke under the [ŋ] may be omitted.
'ɑ:ftə 'ɑ:n sə 'betə di'sembə 'fɑ:ðə 'nevə 'peipə ri'membə 'wʌndə 'æktə 'detə 'dɒktə 'kɒlə 'fʊgə 'kʌlə 'ɔnə 'piktʃə 'kænədə 'ekstrə 'soufə	'i:zi 'evribədi 'fifti 'fʌni 'dʒə:məni 'hɒlədi 'itəli 'dʒænjuəri 'meni 'mʌndi 'mʌni 'nesisri 'peni 'plenti 'priti 'kwikli 'redi 'sɔri 'twenti 'jestədi	'dʌzŋ 'i:tŋ 'i:vŋ 'givŋ 'ɔ:fŋ 'oupŋ 'sevŋ 'sʌdŋ 'teikŋ 'beikŋ di'viʒŋ 'lesŋ 'miʃŋ 'nouʃŋ ə'keizŋ 'pɑ:dŋ ri'lidʒŋ 'steiʃŋ 'sə:tŋ 'kə:tŋ

50.	51.	52.
Syllabic l (See 44).	Initial ə (See 12).	Initial i (See 2).
<p><i>Notes.</i></p> <p>In a less precise notation the small stroke under the [l] may be omitted.</p>	<p><i>Notes.</i></p>	<p><i>Notes.</i></p>
'æpl 'bɒtl 'kɑ:sl 'sə:kl 'litl 'midl 'pi:pəl 'pɒsəbl 'siŋgl 'teibl 'vedʒətəbl 'æniml 'fainl 'speʃl 'ju:ʒl 'kə:nl 'pɑ:sl 'eiprəl 'pensl 'ɔ:fl	ə'baʊt ə'blʌv ə'brɔ:d ək'sept ə'dres əd'vais ə'fɛə ə'gein ə'laik ə'loun ə'merikə ə'nʌðə ə'wei ə'blaɪdʒ ə'keɪʒn ə'klɒk ə'pinʒən pə'mit sək'si:d tə'dei	i'levn i'nʌf ig'zɑ:mpəl ik'sept iks'kjuz iks'pekt iks'plein i'mædʒn i'mens im'pɔ:tnt im'pɒsəbl in'di:d i'regju:lə i'tæljən bi'lou bi'twi:n di'said ri'plai ri'kwaiə si'lekt

SERIES C.

CONSISTING OF 28 GROUPS OF PAIRS OF WORDS LIKELY
TO BE CONFUSED BY FOREIGN STUDENTS ON
ACCOUNT OF THEIR SIMILARITY.

<p style="text-align: center;">53.</p> <p style="text-align: center;"><i>Pairs of words differing only by the substitution of i: for i.</i></p> <p>irt – it fi:l – fil hi:t – hit li:d – lid li:st – list li:v – liv mi:l – mil ri:tʃ – ritʃ ʃi:p – ʃip sli:p – slip</p>	<p style="text-align: center;">55.</p> <p style="text-align: center;"><i>Pairs of words differing only by the substitution of æ for e.</i></p> <p>bæ:d – bed bæ:g – beg gæs – ges hæd – hed mæ:n – men sænd – send tæn – ten sæ:d – sed bæt – bet mæs – mes</p>	<p style="text-align: center;">57.</p> <p style="text-align: center;"><i>Pairs of words differing only by the substitution of ɔ for a:.</i></p> <p>bɔks – bɑ:kʃ klɔk – klɑ:k kɔst – kɑ:st hɔt – hɑ:t lɔk – lɑ:k lɔst – lɑ:st kɔd – kɑ:d kɔt – kɑ:t dɔk – dɑ:k pɔt – pɑ:t</p>
<p style="text-align: center;">54.</p> <p style="text-align: center;"><i>Pairs of words differing only by the substitution of i for e.</i></p> <p>big – beg did – ded fil – fel it – et lift – left mis – mes sins – sens sit – set siks – seks til – tel</p>	<p style="text-align: center;">56.</p> <p style="text-align: center;"><i>Pairs of words differing only by the substitution of ɑ: for æ.</i></p> <p>kɑ:nt – kænt ɑ:m – æm kɑ:d – kæd kɑ:t – kæt hɑ:d – hæd pɑ:k – pæk pɑ:t – pæt ɑ:nt – ænt hɑ:t – hæt mɑ:tʃ – mætʃ</p>	<p style="text-align: center;">58.</p> <p style="text-align: center;"><i>Pairs of words differing only by the substitution of ɔ: for ɔə.</i></p> <p>nɔ: – nɔə ɔ: – ɔə pɔ: – pɔə sɔ: – sɔə rɔ: – rɔə flɔ: – flɔə</p> <p>Some English people make no difference between such pairs.</p>

<p style="text-align: center;">59.</p> <p style="text-align: center;"><i>Pairs of words differing only by the substitution of ɔ: for ɑ:.</i></p> <p> ɔ:t – ɑ:t tɔ:t – tɑ:t kɔ:d – kɑ:d kɔ:t – kɑ:t fɔ: – fɑ: pɔ:k – pɑ:k pɔ:t – pɑ:t stɔ: – stɑ: tɔ: – tɑ: fɔ:st – fɑ:st </p>	<p style="text-align: center;">61.</p> <p style="text-align: center;"><i>Pairs of words differing only by the substitution of Λ for ɑ:.</i></p> <p> $\text{k}\Lambda\text{p}$ – $\text{k}\text{ɑ:p}$ $\text{k}\Lambda\text{t}$ – $\text{k}\text{ɑ:t}$ $\text{m}\Lambda\text{st}$ – $\text{m}\text{ɑ:st}$ $\text{k}\Lambda\text{m}$ – $\text{k}\text{ɑ:m}$ $\text{s}\Lambda\text{m}$ – $\text{s}\text{ɑ:m}$ $\text{d}\Lambda\text{k}$ – $\text{d}\text{ɑ:k}$ $\text{h}\Lambda\text{t}$ – $\text{h}\text{ɑ:t}$ $\text{t}\text{ʃ}\Lambda\text{m}$ – $\text{t}\text{ʃ}\text{ɑ:m}$ $\text{k}\Lambda\text{f}$ – $\text{k}\text{ɑ:f}$ $\text{gr}\Lambda\text{nt}$ – $\text{gr}\text{ɑ:nt}$ </p>	<p style="text-align: center;">63.</p> <p style="text-align: center;"><i>Pairs of words differing only by the substitution of ɔ: for Λ.</i></p> <p> $\text{b}\text{ɔ:n}$ – $\text{b}\Lambda\text{n}$ $\text{k}\text{ɔ:t}$ – $\text{k}\Lambda\text{t}$ $\text{t}\text{ɔ:f}$ – $\text{t}\Lambda\text{f}$ $\text{t}\text{ɔ:k}$ – $\text{t}\Lambda\text{k}$ $\text{t}\text{ɔ:n}$ – $\text{t}\Lambda\text{n}$ $\text{b}\text{ɔ:d}$ – $\text{b}\Lambda\text{d}$ $\text{g}\text{ɔ:l}$ – $\text{g}\Lambda\text{l}$ $\text{ʃ}\text{ɔ:t}$ – $\text{ʃ}\Lambda\text{t}$ $\text{s}\text{ɔ:tʃ}$ – $\text{s}\Lambda\text{tʃ}$ $\text{f}\text{ɔ:n}$ – $\text{f}\Lambda\text{n}$ </p>
<p style="text-align: center;">60.</p> <p style="text-align: center;"><i>Pairs of words differing only by the substitution of ɔ: for ɔ.</i></p> <p> $\text{k}\text{ɔ:d}$ – $\text{k}\text{ɔd}$ $\text{k}\text{ɔ:k}$ – $\text{k}\text{ɔk}$ $\text{f}\text{ɔ:ks}$ – $\text{f}\text{ɔks}$ $\text{p}\text{ɔ:t}$ – $\text{p}\text{ɔt}$ $\text{sk}\text{ɔ:tʃ}$ – $\text{sk}\text{ɔtʃ}$ $\text{ʃ}\text{ɔ:t}$ – $\text{ʃ}\text{ɔt}$ $\text{sp}\text{ɔ:t}$ – $\text{sp}\text{ɔt}$ $\text{st}\text{ɔ:k}$ – $\text{st}\text{ɔk}$ $\text{n}\text{ɔ:t}$ – $\text{n}\text{ɔt}$ $\text{w}\text{ɔ:t}$ – $\text{w}\text{ɔt}$ </p>	<p style="text-align: center;">62.</p> <p style="text-align: center;"><i>Pairs of words differing only by the substitution of Λ for æ.</i></p> <p> $\text{b}\Lambda\text{d}$ – $\text{b}\text{æ:d}$ $\text{b}\Lambda\text{g}$ – $\text{b}\text{æ:g}$ $\text{b}\Lambda\text{ŋk}$ – $\text{b}\text{æ:ŋk}$ $\text{b}\Lambda\text{t}$ – $\text{b}\text{æt}$ $\text{k}\Lambda\text{p}$ – $\text{k}\text{æp}$ $\text{k}\Lambda\text{t}$ – $\text{k}\text{æt}$ $\text{h}\Lambda\text{t}$ – $\text{h}\text{æt}$ $\text{l}\Lambda\text{mp}$ – $\text{l}\text{æmp}$ $\text{m}\Lambda\text{tʃ}$ – $\text{m}\text{æ:tʃ}$ $\text{r}\Lambda\text{n}$ – $\text{r}\text{æn}$ </p>	<p style="text-align: center;">64.</p> <p style="text-align: center;"><i>Pairs of words differing only by the substitution of ei for e.</i></p> <p> eidz – edz deit – det eit – et geit – get leit – let pein – pen seil – sel teil – tel teist – test weit – wet </p>

<p style="text-align: center;">65.</p> <p style="text-align: center;"><i>Pairs of words differing only by the substitution of ei for ai.</i></p> <p>feil – fail heit – hait leik – laik lei – lai mei – mai peint – paint reid – raid teil – tail weit – wait wei – wai</p>	<p style="text-align: center;">67.</p> <p style="text-align: center;"><i>Pairs of words differing only by the substitution of ou for o.</i></p> <p>klouk – kløk koust – køst koud – kød kouk – køk houp – höp foun – fön souk – sök wount – wönt roud – rød rout – röt</p>	<p style="text-align: center;">69.</p> <p style="text-align: center;"><i>Pairs of words differing only by the substitution of ou for au.</i></p> <p>bou – bau houl – haul loud – laud nou – nau rou – rau sou – sau toun – taun koutf – kautf gout – gaut rouz – rauz</p>
<p style="text-align: center;">66.</p> <p style="text-align: center;"><i>Pairs of words differing only by the substitution of ou for o:</i></p> <p>bout – bø:t bould – bø:ld boun – bø:n klouz – klø:z koul – kø:l kould – kø:ld kouk – køk nou – nø: rou – rø: sou – sø:</p>	<p style="text-align: center;">68.</p> <p style="text-align: center;"><i>Pairs of words differing only by the substitution of ou for u:</i></p> <p>tʃouz – tʃu:z group – gru:p houm – hu:m houz – hu:z poul – pu:l roul – ru:l roum – ru:m rout – ru:t bout – bu:t koul – ku:l</p>	<p style="text-align: center;">70.</p> <p style="text-align: center;"><i>Pairs of words differing only by the substitution of p for b.</i></p> <p>peə – beə pei – bei pul – bul puʃ – buʃ pæk – bæk piə – biə pest – best pig – big kʌp – kʌb kæp – kæ:b</p>

<p style="text-align: center;">71.</p> <p style="text-align: center;"><i>Pairs of words differing only by the substitution of t for d.</i></p> <p>tu: – du: tʌtʃ – dʌtʃ taun – daun tiə – diə traɪ – draɪ bʌt – bʌd eit – eid sɔ:t – sɔ:d meɪt – meɪd sent – send</p>	<p style="text-align: center;">73.</p> <p style="text-align: center;"><i>Pairs of words differing only by the substitution of f for v.</i></p> <p>fi:l – vi:l fə:st – və:st faul – vaul fɑ:st – vɑ:st fju: – vju: feɪl – veɪl faɪn – vaɪn li:f – li:v seɪf – seɪv pru:f – pru:v</p>	<p style="text-align: center;">75.</p> <p style="text-align: center;"><i>Pairs of words differing only by the substitution of tʃ for dʒ.</i></p> <p>tʃɪn – dʒɪn tʃu: – dʒu: tʃouk – dʒouk tʃest – dʒest tʃiə – dʒiə rɪtʃ – rɪdʒ bætʃ – bædʒ lɑ:tʃ – lɑ:dʒ</p>
<p style="text-align: center;">72.</p> <p style="text-align: center;"><i>Pairs of words differing only by the substitution of k for g.</i></p> <p>kɑ:d – gɑ:d kould – gould kʌm – gʌm kə:l – gə:l klɑ:s – glɑ:s bæk – bæ:g dɔk – dɔg pek – peg ræk – ræg dik – dig</p>	<p style="text-align: center;">74.</p> <p style="text-align: center;"><i>Pairs of words differing only by the substitution of s for z.</i></p> <p>sɪŋk – zɪŋk sɪ:s – zɪ:z lu:s – lu:z raɪs – raɪz ju:s – ju:z pi:s – pi:z hɪs – hɪz feɪs – feɪz pleɪs – pleɪz reɪs – reɪz</p>	<p style="text-align: center;">76.</p> <p style="text-align: center;"><i>Pairs of words differing only by the substitution of l for r.</i></p> <p>leɪs – reɪs lə: – rɔ: lək – rɔk ləu – rou led – red ləɪt – raɪt ləŋ – rɔŋ flɪ: – frɪ: lɪst – rɪst ləɪm – raɪm</p>

77.

*Pairs of words
differing only by
the substitution of
ŋ for ŋk.*

θiŋ	-	θiŋk
siŋ	-	siŋk
sæŋ	-	sæŋk
sʌŋ	-	sʌŋk
wiŋ	-	wiŋk
briŋ	-	briŋk

79.

*Pairs of words
differing only by
the addition of
final i.*

i:z	-	'i:zi
sʌn	-	'sʌni
pen	-	'peni
red	-	'redi
fʌn	-	'fʌni
dʌst	-	'dʌsti
mʌd	-	'mʌdi
wind	-	'windi
slɪ:p	-	'slɪ:pi
greiv	-	'greivi

78.

*Pairs of words
differing only by
the addition of
final ə.*

bet	-	'betə
ækt	-	'æktə
det	-	'detə
ɔn	-	'ɔnə
big	-	'bigə
smɔ:l	-	'smɔ:lə
red	-	'redə
beg	-	'begə
ju:z	-	'ju:zə
ri:d	-	'ri:də

80.

*Pairs of words
differing only by
the addition of
initial ə.*

brɔ:d	-	ə'brɔ:d
dres	-	ə'dres
fəə	-	ə'fəə
gein	-	ə'gein
laik	-	ə'laik
wei	-	ə'wei
klɔk	-	ə'klɔk
pɑ:t	-	ə'pɑ:t
weik	-	ə'weik
slɪ:p	-	ə'slɪ:p

ORTHOGRAPHIC TEXT OF THE 80
EXERCISES ON ENGLISH WORDS.

SERIES A.

1.	2.	3.
i:	i	e
<i>Vowel. Front. Close. Tense. Long.</i>	<i>Vowel. Front. Close. Lax. Short.</i>	<i>Vowel. Front. Semi-close. Lax. Short.</i>
<i>Notes.</i>	<i>Notes.</i>	<i>Notes.</i>
be been deep free green keep meet see street week eat leave mean 'please pleased read speak tea piece key	big did fill give his if ill in it quick lift live miss since sit six stick still till build	best else end get help left men next send tell ten twelve well went when yes ate friend said says

4.	5.	6..
æ	ɑ:	ɔ
<i>Vowel.</i> <i>Front.</i> <i>Semi-open.</i> <i>Lax.</i> <i>Short or Long.</i>	<i>Vowel.</i> <i>Back.</i> <i>Open.</i> <i>Lax.</i> <i>Long.</i>	<i>Vowel.</i> <i>Back.</i> <i>Semi-open.</i> <i>Lax.</i> <i>Short.</i>
Notes.	Notes.	Notes.
back bad bag bank black drank fact fat flag flat gas glad had has have man sand stand tram plaid	ask can't fast grass half last arm card cart dark far hard park part star start aren't laugh clerk heart	box clock cost dog drop got — hot knock lock lost lot not on pond soft spot stop want wash what

7.	8.	9.
ɔ:	u	u:
<i>Vowel.</i> <i>Back.</i> <i>Semi-open.</i> <i>Rounded.</i> <i>Tense. Long.</i>	<i>Vowel.</i> <i>Back.</i> <i>Close.</i> <i>Rounded.</i> <i>Lax. Short.</i>	<i>Vowel.</i> <i>Back.</i> <i>Close.</i> <i>Rounded.</i> <i>Tense. Long.</i>
<i>Notes.</i>	<i>Notes.</i>	<i>Notes.</i>
all call fall small walk wall sauce law saw warm fork horse sort board bought ought taught yours off towards	book cook foot good hook look shook took wood wool full pull push put could should would wolf bush bull	boot moon room school soon spoon too June rule blue true fruit do lose move two who soup shoe through

9a.	10.	11.
ju:	ʌ	ə:
<i>(Identical with 9, but preceded by the consonant [j]; see No. 37.)</i>	<i>Vowel. Mixed. Open. Lax. Short.</i>	<i>Vowel. Mixed. Semi-close. Tense. Long.</i>
<i>Notes.</i>	<i>Notes.</i>	<i>Notes.</i>
cube duke dupe fuse huge mule tube tune use use cue due you youth view dew few knew new suit	but cup cut must shut sun up us come done love none once one some son touch young blood does	burn hurt purse turn bird first girl shirt heard learn year hers verb were weren't word work world worse worst

12.	13.	14.
ə	ei	ou
<i>Vowel.</i> <i>Mixed.</i> <i>Semi-close.</i> <i>Lax.</i> <i>Short.</i>	<i>Diphthong</i> <i>(or Double-vowel).</i> <i>Front.</i> <i>[e] and [i] in rapid</i> <i>succession with-</i> <i>out interruption.</i>	<i>Diphthong</i> <i>(or Double-vowel).</i> <i>Back.</i> <i>[o] and [u] in rapid</i> <i>succession without</i> <i>interruption.</i>
Notes.	Notes.	Notes.
a an the was were can must them us as at for from of to and but some than that	came face late make name plate take paid wait day may pay play say stay vein eight grey break great	cold go home hope no old sold spoke stone boat coal soap know low brooch mauve soul sew toe though

15.	16. X	17.
ai	au	oi
<p><i>Diphthong (or Double-vowel). Front. [a] and [i] in rapid succession without interrup- tion.</i></p>	<p><i>Diphthong (or Double-vowel). Front to Back. [a] and [u] in rapid succession without interrup- tion.</i></p>	<p><i>Diphthong (or Double-vowel). Back to Front. [ɔ] and [i] in rapid succession without interrup- tion.</i></p>
<p><i>Notes.</i></p>	<p><i>Notes.</i></p>	<p><i>Notes.</i></p>
<p>find five I like mine nice quite time white write high light night right buy by my why eye tie</p>	<p>cloud count crown doubt found house loud mouse mouth out round sound stout brown cow crowd how now town plough</p>	<p>boil choice coin join loin oil royal soil spoil spoilt toy voice boy joy noise</p>

18.	19.	20.
iə	ɛə	ɔə
<p><i>Diphthong</i> (or <i>Double-vowel</i>). <i>Centring.</i> [i] and [ə] in <i>rapid succession</i> <i>without interrup-</i> <i>tion.</i></p>	<p><i>Diphthong</i> (or <i>Double-vowel</i>). <i>Centring.</i> [ɛ] and [ə] in <i>rapid succession</i> <i>without interrup-</i> <i>tion.</i></p>	<p><i>Diphthong</i> (or <i>Double-vowel</i>). <i>Centring.</i> [ɔ] and [ə] in <i>rapid succession</i> <i>without interrup-</i> <i>tion.</i></p>
Notes.	Notes.	Notes.
ear beard — clear dear fear hear near tear beer cheer deer queer here pier weird	air chair fair hair pair stairs bear — pear swear tear wear care share square their theirs mayor prayer there where	bore more nor or pore shore sore — store tore boar oar roar door floor war four pour your drawer sure



21.	22.	23.
uə	p	b
<p><i>Diphthong</i> (or <i>Double-vowel</i>). <i>Centring.</i> [u] and [ə] in <i>rapid succession</i> without <i>interrup-</i> <i>tion.</i></p>	<p><i>Consonant.</i> <i>Plosive.</i> <i>Obstruction</i> <i>Place I.</i> (<i>Lip-lip.</i>) <i>Unvoiced.</i></p>	<p><i>Consonant.</i> <i>Plosive.</i> <i>Obstruction</i> <i>Place I.</i> (<i>Lip-lip.</i>) <i>Voiced.</i></p>
Notes.	Notes.	Notes.
<p>poor moor tour sure truer cure pure fewer</p>	<p>paid pair part pay piece plate play please pull pure push put cup drop help hope lamp soap soup up</p>	<p>back bad bag be bear been beer best big black book boot bought box burn bush but buy cab rub</p>

24.	25.	26.
t	d	k
<p><i>Consonant.</i> <i>Plosive.</i> <i>Obstruction</i> <i>Place 4.</i> <i>(Ridge-blade.)</i> <i>Unvoiced.</i></p>	<p><i>Consonant.</i> <i>Plosive.</i> <i>Obstruction</i> <i>Place 4.</i> <i>(Ridge-blade.)</i> <i>Voiced.</i></p>	<p><i>Consonant.</i> <i>Plosive.</i> <i>Obstruction</i> <i>Place 6.</i> <i>(Soft Palate-back.)</i> <i>Unvoiced.</i></p>
<p><i>Notes.</i></p>	<p><i>Notes.</i></p>	<p><i>Notes.</i></p>
<p>take tea ten time too took touch town turn two best boat boot but eight fat meet put sort what</p>	<p>day dear deep did do does dog done dry dust card end find heard made old paid red send word</p>	<p>call card clean cold come cup keep key quick quite ask back black book knock park stick speak walk work</p>

27.	28.	29.
g	m	n
<i>Consonant.</i> <i>Plosive.</i> <i>Obstruction</i> <i>Place 6.</i> <i>(Soft Palate-back.)</i> <i>Voiced.</i>	<i>Consonant.</i> <i>Nasal.</i> <i>Obstruction</i> <i>Place 1.</i> <i>(Lip-lip.)</i> <i>Voiced.</i>	<i>Consonant.</i> <i>Nasal.</i> <i>Obstruction</i> <i>Place 4.</i> <i>(Ridge-blade.)</i> <i>Voiced.</i>
<i>Notes.</i>	<i>Notes.</i>	<i>Notes.</i>
gas get girl give glad glass glove go good got grass green grey bag big dig dog fog rag vague	man make may mean meet men milk mine miss <u>moon</u> my arm home lamb lamp name room same some warm	knock know name next nice night nine no none now been burn June man mean men send skin soon stone



30.	31.	32.
ŋ	w	f
<i>Consonant.</i> <i>Nasal.</i> <i>Obstruction</i> <i>Place 6.</i> <i>(Soft Palate-back.)</i> <i>Voiced.</i>	<i>Consonant.</i> <i>Fricative.</i> <i>Double obstruction</i> <i>Places 1 & 6.</i> <i>(Lip-lip and Soft</i> <i>Palate-back.)</i> <i>Voiced.</i>	<i>Consonant.</i> <i>Fricative.</i> <i>Obstruction</i> <i>Place 2.</i> <i>(Teeth-lip.)</i> <i>Unvoiced.</i>
Notes.	Notes.	Notes.
bring hang king long lungs wrong sing song spring string thing wing young drink drunk ink pink thank think trunk	wait walk war warm well west wet what when where which why will wine wood wool word work world worse	face fair fall fault field fill find first five food foot fork found fall cough half if laugh left off

33.	34.	35.
v	θ	ð
<i>Consonant.</i> <i>Fricative.</i> <i>Obstruction</i> <i>Place 2.</i> <i>(Teeth-lip.)</i> <i>Voiced.</i>	<i>Consonant.</i> <i>Fricative.</i> <i>Obstruction</i> <i>Place 3.</i> <i>(Teeth-blade.)</i> <i>Unvoiced.</i>	<i>Consonant.</i> <i>Fricative.</i> <i>Obstruction</i> <i>Place 3.</i> <i>(Teeth-blade.)</i> <i>Voiced.</i>
<i>Notes.</i>	<i>Notes.</i>	<i>Notes.</i>
vague vain vast vein verb verse view voice vote vowel five give glove have leave live love shave twelve wave	thick thief thin think throw bath earth eighth fifth fourth health month mouth ninth north sixth south tenth tooth truth	that their them them then there these they they're this those though thus bathe breathe lathe loathe soothe with

36.	37.	38.
r	j	h
<i>Consonant.</i> <i>Fricative.</i> <i>Obstruction</i> <i>Place 4. (Ridge-blade.) Voiced.</i>	<i>Consonant.</i> <i>Fricative.</i> <i>Obstruction Place 5 (Hard Palate-front) Voiced.</i>	<i>Consonant.</i> <i>Fricative.</i> <i>Obstruction Place 8 (Vocal chords.) Unvoiced.</i>
Notes.	Notes.	Notes.
rare rat red rich right rose wrong bring brown green ground cream free French friend press street three true try	yacht yard year yes yet <u>York</u> you young your you're yours few knew suit cube huge tube duke fuse tune	half hair ham hand hard harm hat have hay high hill hold how who whose he heal hear heat here

39.	40.	41.
s	z	ʒ
<i>Consonant.</i> <i>Sibilant Fricative.</i> <i>Obstruction</i> <i>Place 4.</i> <i>(Ridge-blade.)</i> <i>Unvoiced.</i>	<i>Consonant.</i> <i>Sibilant Fricative.</i> <i>Obstruction</i> <i>Place 4.</i> <i>(Ridge-blade.)</i> <i>Voiced.</i>	<i>Consonant.</i> <i>Sibilant Fricative.</i> <i>Obstruction</i> <i>Place 4.</i> <i>(Ridge-blade.)</i> <i>Unvoiced.</i>
<i>Notes.</i>	<i>Notes.</i>	<i>Notes.</i>
cease cell same say see sell send side since so face France grass horse lace loose nice rice six worse	zeal zest zinc zone Zoo cheese does goes hers his knows lose noise nose ours says size stairs years yours	shake shape share sharp sheep sheet shell shine ship shoe shop short show shut cash dish fish push wish wash

42.	43.	44.
3	l	ł
<i>Consonant.</i> <i>Sibilant Fricative.</i> <i>Obstruction</i> <i>Place 4.</i> <i>(Ridge-blade.)</i> <i>Voiced.</i>	<i>Consonant.</i> <i>Lateral Fricative.</i> <i>Obstruction</i> <i>Place 4.</i> <i>(Ridge-blade.)</i> <i>Voiced.</i>	<i>Consonant.</i> <i>Lateral Fricative.</i> <i>Obstruction Place 4</i> <i>(Ridge-blade.)</i> <i>(with back of tongue</i> <i>in the u-position.)</i> <i>Voiced.</i>
Notes.	Notes.	Notes.
pleasure treasure measure leisure azure occasion vision decision illusion fusion invasion allusion	lace last late law leaf learn leave left leg lend let lid life lift like live lock look lose low	all bell bill call coal feel field full gold help hill hold old pale pull rule small smell tell well

45.	46.
tʃ	dʒ
<p><i>Double Consonant.</i> <i>Affricate.</i> <i>Obstruction</i> <i>Place 4.</i> <i>(Ridge-blade.)</i> <i>Unvoiced.</i></p>	<p><i>Double Consonant.</i> <i>Affricate.</i> <i>Obstruction</i> <i>Place 4.</i> <i>(Ridge-blade.)</i> <i>Voiced.</i></p>
<p><i>Notes.</i></p>	<p><i>Notes.</i></p>
<p>chance charm cheap cheese cheque chess child choice choose chop catch church each March match much reach rich teach touch</p>	<p>gem germ gin jam Jew join joke joy jug juice jump June just age cage judge large page siege wedge</p>

✕

SERIES B.

CONSISTING OF SIX USEFUL SETS OF WORDS CONTAIN-
ING (FINAL OR INITIAL) WEAK SYLLABLES.

47.	48.	49.
<i>Final ə</i> (See 12).	<i>Final i</i> (See 2).	<i>Syllabic ŋ</i> (See 28).
<i>Notes.</i>	<i>Notes.</i>	<i>Notes.</i>
after answer better December father never paper remember wonder actor debtor doctor collar sugar colour honour picture Canada extra sofa	easy everybody fifty funny Germany holiday Italy January many Monday money necessary penny plenty pretty quickly ready sorry twenty yesterday	dozen eaten even given often open seven sudden taken bacon division lesson mission notion occasion pardon religion station certain curtain

50.	51.	52.
<i>Syllabic ɹ</i> (See 43).	<i>Initial ə</i> (See 12).	<i>Initial i</i> (See 2).
<i>Notes.</i>	<i>Notes.</i>	<i>Notes.</i>
apple bottle castle circle little middle people possible single table vegetable animal final special usual colonel parcel April pencil awful	about above abroad accept address advice affair again alike alone America another away oblige occasion o'clock opinion permit succeed to-day	eleven enough example except excuse expect explain imagine immense important impossible indeed irregular Italian below between decide reply require select

SERIES C.

CONSISTING OF 28 GROUPS OF PAIRS OF WORDS LIKELY
TO BE CONFUSED BY FOREIGN STUDENTS ON
ACCOUNT OF THEIR SIMILARITY.

<p>53.</p> <p><i>Pairs of words differing only by the substitution of i: for i.</i></p> <p>eat – it feel – fill heat – hit lead – lid least – list leave – live meal – mill reach – rich sheep – ship sleep – slip</p>	<p>55.</p> <p><i>Pairs of words differing only by the substitution of æ for e.</i></p> <p>bad – bed bag – beg gas – guess had – head man – men sand – send tan – ten sad – said bat – bet mass – mess</p>	<p>57.</p> <p><i>Pairs of words differing only by the substitution of ɔ for a:.</i></p> <p>box – barks clock – clerk cost – cast hot – heart lock – lark lost – last cod – card cot – cart dock – dark pot – part</p>
<p>54.</p> <p><i>Pairs of words differing only by the substitution of i for e.</i></p> <p>big – beg did – dead fill – fell it – ate lift – left miss – mess since – sense sit – set six – sex till – tell</p>	<p>56.</p> <p><i>Pairs of words differing only by the substitution of a: for æ.</i></p> <p>can't – cant arm – am card – cad cart – cat hard – had park – pack part – pat aunt – ant heart – hat march – match</p>	<p>58.</p> <p><i>Pairs of words differing only by the substitution of ɔ: for ɔæ.</i></p> <p>gnaw – nor awe – or paw – pour saw – sore raw – roar flaw – floor</p>

<p style="text-align: center;">59.</p> <p style="text-align: center;"><i>Pairs of words differing only by the substitution of o: for a:.</i></p> <p>ought – art taught – tart cord – card caught – cart four – far pork – park port – part store – star tore – tar forced – fast</p>	<p style="text-align: center;">61.</p> <p style="text-align: center;"><i>Pairs of words differing only by the substitution of ʌ for a:.</i></p> <p>cup – carp cut – cart must – mast come – calm some – psalm duck – dark hut – heart chum – charm cuff – calf grunt – grant</p>	<p style="text-align: center;">63.</p> <p style="text-align: center;"><i>Pairs of words differing only by the substitution of ə: for ʌ.</i></p> <p>burn – bun curt – cut turf – tough Turk – tuck turn – ton bird – bud girl – gull shirt – shut search – such fern – fun</p>
<p style="text-align: center;">60.</p> <p style="text-align: center;"><i>Pairs of words differing only by the substitution of ɔ: for ɔ.</i></p> <p>cord – cod cork – cock forks – fox port – pot scorch – Scotch short – shot sport – spot stork – stock nought – not wart – what</p>	<p style="text-align: center;">62.</p> <p style="text-align: center;"><i>Pairs of words differing only by the substitution of ʌ for æ.</i></p> <p>bud – bad bug – bag bunk – bank but – bat cup – cap cut – cat hut – hat lump – lamp much – match run – ran</p>	<p style="text-align: center;">64.</p> <p style="text-align: center;"><i>Pairs of words differing only by the substitution of ei for e.</i></p> <p>age – edge date – debt eight – ate gate – get late – let pain – pen sail – sell tail – tell taste – test wait – wet</p>

<p style="text-align: center;">65.</p> <p style="text-align: center;"><i>Pairs of words differing only by the substitution of ei for ai.</i></p> <p>fail – file hate – height lake – like lay – lie may – my paint – pint raid – ride tail – tile wait – white way – why</p>	<p style="text-align: center;">67.</p> <p style="text-align: center;"><i>Pairs of words differing only by the substitution of ou for o.</i></p> <p>cloak – clock coast – cost code – cod coke – cock hope – hop shown – shone soak – sock won't – want road – rod wrote – rot</p>	<p style="text-align: center;">69.</p> <p style="text-align: center;"><i>Pairs of words differing only by the substitution of ou for au.</i></p> <p>bow – bow hole – howl load – loud know – now row – row sew – sow tone – town coach – couch goat – gout rose – rouse</p>
<p style="text-align: center;">66.</p> <p style="text-align: center;"><i>Pairs of words differing only by the substitution of ou for o.</i></p> <p>boat – bought bold – bald bone – born close – clause coal – call cold – called coke – cork know – gnaw row – raw sew – saw</p>	<p style="text-align: center;">68.</p> <p style="text-align: center;"><i>Pairs of words differing only by the substitution of ou for u.</i></p> <p>chose – choose grobe – group home – whom hose – whose pole – pool roll – rule Rome – room wrote – root boat – boot coal – cool</p>	<p style="text-align: center;">70.</p> <p style="text-align: center;"><i>Pairs of words differing only by the substitution of p for b.</i></p> <p>pair – bear pay – bay pull – bull push – bush pack – back pier] – beer pest – best pig – big cup – cub cap – cab</p>

<p style="text-align: center;">71.</p> <p style="text-align: center;"><i>Pairs of words differing only by the substitution of t for d.</i></p> <p>two – do touch – Dutch town – down tear – dear try – dry but – bud eight – aid sort – sword mate – made sent – send</p>	<p style="text-align: center;">73.</p> <p style="text-align: center;"><i>Pairs of words differing only by the substitution of f for v.</i></p> <p>feel – veal first – versed foul – vowel fast – vast few – view fail – veil fine – vine leaf – leave safe – save proof – prove</p>	<p style="text-align: center;">75.</p> <p style="text-align: center;"><i>Pairs of words differing only by the substitution of tʃ for dʒ.</i></p> <p>chin – gin chew – Jew choke – joke chest – jest cheer – jeer rich – ridge batch – badge larch – large</p>
<p style="text-align: center;">72.</p> <p style="text-align: center;"><i>Pairs of words differing only by the substitution of k for g.</i></p> <p>card – guard cold – gold come – gum curl – girl class – glass back – bag dock – dog peck – peg rack – rag Dick – dig</p>	<p style="text-align: center;">74.</p> <p style="text-align: center;"><i>Pairs of words differing only by the substitution of s for z.</i></p> <p>sink – zinc cease – seize loose – lose rice – rise use – use piece – peas hiss – his face – phase place – plays race – raise</p>	<p style="text-align: center;">76.</p> <p style="text-align: center;"><i>Pairs of words differing only by the substitution of l for r.</i></p> <p>lace – race law – raw lock – rock low – row lead – read light – right long – wrong flea – free list – wrist lime – rhyme</p>

77.

*Pairs of words
differing only by
the substitution of
ŋ for ŋk.*

thin - think
sing - sink
sang - sank
sung - sunk
wing - wink
bring - brink

79.

*Pairs of words
differing only by
the addition of
final i.*

ease - easy
sun - sunny
pen - penny
red - ready
fun - funny
dust - dusty
mud - muddy
wind - windy
sleep - sleepy
grave - gravy

78.

*Pairs of words
differing only by
the addition of
final ə.*

bet - better
act - actor
debt - debtor
on - honour
big - bigger
small - smaller
red - redder
beg - beggar
use - user
read - reader

80.

*Pairs of words
differing only by
the addition of
initial ə.*

broad - abroad
dress - address
fair - affair
gain - again
like - alike
way - away
clock - o'clock
part - apart
wake - awake
sleep - asleep

SERIES D.

TRANSCRIPTION EXERCISES.

Exercises marked *A* to be transcribed from phonetic into orthographic script. Those marked *B* to be treated in the inverse sense.

(1.) Sounds 1 to 4.

A. liv, li:v, wel, giv, bæ:d, sed, wi:k, flæt, lift, frend, stænd, si:

B. Mean, six, black, keep, tell, please, else, did, plaid, fact, piece, twelve.

(2.) Sounds 5 to 8.

A. dɑ:k, dɔg, ɔ:t, fut, fɑ:st, nɔt, hɔ:s, put, wɔnt, lɑ:f, sɔ:, kud.

B. Hot, book, hard, small, on, full, towards, heart, knock, bought, last, good.

(3.) Sounds 9 to 12.

A. fə, mu:v, dʌn, bæ:d, ju:, wɛ:d, əv, kʌt, ju:z, tɛ:n, lʌv, ðəm.

B. Work, an, school, come, to, tube, year, does, knew, burn, up, was.

(4.) Recapitulation of Sounds 1 to 12.

A. i:t, wɔ:m, sun, ten, wul, sins, wʌns, bæ:k, grɑ:s, pɛ:s, wɔʃ, ənd.

B. For, few, wall, lock, build, first, part, sun, put, bad, speak, ate.

(5.) Sounds 13 to 15.

A. spouk, meik, taim, houm, nait, sei, bai, lou, teik, tou, greit, wait.

B. Came, quite, no, name, my, know, five, eight, I, hope, break, soap.

(6.) Sounds 16 to 18.

A. bɔi, hiə, laud, spɔil, braun, diə, tʃɔis, hau, dʒɔi, nau, biə, niə.

B. Queer, oil, count, ear, coin, now, deer, mouse, dear, voice, spoilt, doubt.

(7.) Sounds 19 to 21.

A. mɔə, puə, tʃɛə, dɔə, kɛə, pjʊə, tɔə, ʃɛə, wɔə, mɛə, kjuə, ɛə.

B. Store, cure, wear, four, there, bear, floor, pure, sore, tour, drawer, where.

(8.) Recapitulation of Sounds 1 to 21.

A. wait, did, kjuə, men, stoun, bæk, pɛə, əs, taun, tu:, fɑ:, dɔə, wɔ:st, bɔil, ʃuk, iə, leit, ʃæt, wɔ:k, drɔp, mi:t.

B. Heart, shoe, green, oil, wolf, sore, live, fear, poor, friend, write, flat, hurt, stop, sold, board, touch, was, paid, round, swear.

(9.) Sounds 22 to 25.

A. dei, red, pleit, drai, help, bæ:d, dʌst, ʌp, pli:z, fæt, buʃ, tʌtʃ.

B. What, ten, rub, play, been, cab, lamp, buy, pair, bag, boat, boot.

(10.) Sounds 26 to 29.

A. kɔ:l, pʌ:k, gud, wɔ:k, dɔg, milk, gɔ:l, seim, nɔk, mis, skin, nais.

B. Been, night, know, mean, arm, warm, go, fog, get, key, black, cup.

(11.) Sounds 30 to 33.

A. θɪŋ, wain, feis; θɪŋk, west, trʌŋk, lɑ:f, wai, fʊ:d, faiv, vein, vout.

B. Glove, field, song, have, leave, wet, ink, fall, bring, west, found, warm.

(12.) Sounds 34 to 37.

A. θɪn, ðɛə, rouz, ə:θ, jet, siksθ, frend, ðis, jes, ðen, trai, jɑ:d.

B. York, three, there, yacht, eighth, these, you, right, bathe, rich, bath, north.

(13.) Sounds 38 to 41.

A. hɑ:f, si:, zoun, hæv, ʃɪp, gouz, hu:z, frɑ:ns, feik, lu:s, saiz, wɪʃ.

B. Wash, sharp, lose, loose, how, noise, shoe, who, yours, side, he, cheese.

(14.) Sounds 43 to 46.

A. left, peil, keɪdʒ, liv, mʌtʃ, bel, tʃɑ:ns, laɪf, help, dʒu:s, tʃə:tʃ, dʒʌdʒ.

B. Large, chop, gold, jam, cheap, leg, smell, jug, March, feel, like, learn.

(15.) Recapitulation of Sounds 22 to 46.

A. dʒʌst, ðou, læm, klɪ:n, krɪ:m, greɪ, ri:tʃ, lə:n, nekst, jʌŋ, smɔɪl, hə:z, nɔ:θ, dʌz, vɑ:st, hi:t, pʊʃ, hɔ:s, fut, rʌb, jɑ:d, wen, sɔ:t, pɑ:t.

B. Paid, tea, quick, glove, true, cab, shine, none, card, wool, their, glass, health, cease, warm, wrong, your, hand, zinc, first, lose, all, much, age.

(16.) 47 to 52.

A. 'prɪti, ə'wei, 'detə, 'meni, 'dʌzŋ, 'kɑ:sɪ, 'peɪpə, 'gɪvŋ, i'nʌf, tə'dei, 'pi:pl, bi'lou, ai'diə, steɪʃŋ, 'mʌni, 'speɪʃl, di'said, ə'loun.

B. Eleven, address, sudden, funny, doctor, select, circle, expect, table, Italy, o'clock, permit, certain, sugar, America, taken, ready, answer.

(17.) General Recapitulation.

A. dʌz, wɒt, driŋk, fæt, iks'plein, aut, 'wʌndə, tʃɑ:m, graund, ðouz, if, bu:t, ʃɒp, nɔiz, dʒʌg, hæt, ɔ:l, 'midl, kʌp, ri'plai, said, rait, peid, 'ɔ:fn, bout, 'hɒlədi, mɑ:ʃ, jə:, nekst, 'piktʃə, mai, əd'vais, ful, fiʃ, bɑ:θ, hai, 'kə:nl, mei, lɑ:st, sins, dʒʌdʒ, jʌŋ, liv, vein, dig, ə'blaɪdʒ, gould, hæv, ould, ə'pinjən, get, 'jestədi, ðis, wen, mɒə, niə, fju:, ki:p, mʌnθ, lʌŋz, bi:n, pjuə, hɛə, lu:z, biə, glʌv, hɑ:f, bɔ:t, pul, wɒə, nɔiz, nou, teik, bai, əz, ʃæt, blʌd, huk, bɔ:d, wɔ:l, pɒnd, stɑ:t, flæg, ten, ti:, li:v.

B. Bird, oil, vague, use, little, plenty, notion, final, piece, meet, men, some, boot, clear, lamb, went, knock, abroad, his, bring, joy, hang, square, gas, half, fact, face, at, keep, whose, heart, sharp, a, knew, tore, could, yet, want, done, hill, all, ink, blue, blood, soup, weren't, bill, may, build, quite, laugh, size, pier, crown, know, wash, world, debtor, walk, those, wool, sorry, great, coal, foot, high, war, excuse, sew, with, plough, lose, find, stairs, year, there, Monday, store, horse, soap, lesson, rub, press, chance, heard, castle, Canada, eaten, above, imagine.

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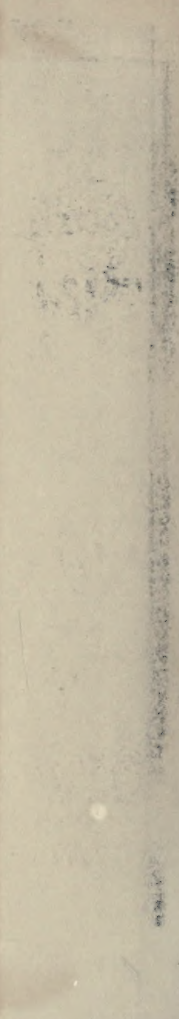
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